

## EXHIBITS

EXHIBIT A	Phase I Commonwealth of Kentucky Solicitation Form
EXHIBIT B	Wage Rates for <u>informational purposes only</u> --not an "official" document. <b>Offeror is solely responsible for contacting the Labor Cabinet for official wage rates.</b>
EXHIBIT C	HMB, Joe Grider, Project Site Plan (approximately 33.988 acres); Survey w/Topo
EXHIBIT D	Draft Deed between COK (Grantor) and successful Offeror (Grantee)
EXHIBIT E	Temporary Construction Easement and Ingress/Egress Easement (Grantor: Commonwealth of Kentucky; Grantee: successful Offeror)
EXHIBIT F	DHBC Guidance on Partial Permits
EXHIBIT G	Environmental Site Assessment
EXHIBIT H	Traffic Study
EXHIBIT I	General and Specific Project Requirements/Specs
EXHIBIT J	Draft Lease Agreement; Commonwealth of Kentucky, as Lessee; successful Offeror, as Lessor
EXHIBIT K	Deed of Conveyance between City of Frankfort (Grantor) and COK (Grantee) – Sower Boulevard property
EXHIBIT L	Minority Business Enterprise Participation Form
EXHIBIT M	Commonwealth of Kentucky Solicitation Form for Phase II
EXHIBIT N	Evaluation Score Sheet (Phase I and Phase II)

\*Preliminary Geo-Tech issued as an addendum

END OF RFP#082514

# Exhibit A

## Phase I Commonwealth of KY Solicitation Form

# Commonwealth of Kentucky SOLICITATION

TITLE: Frankfort Office Build-to-Suit RFP#082514

## DATE ISSUED

2014-06-16

## SOLICITATION CLOSURES

Date: 2014-06-27

Time: 10:30:00

## SOLICITATION NO.

RFP 785 1400000461

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Finance Div of Real Property

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OPlease see the Terms and Conditions  
For Information on where to submit  
Your Bid/Proposal.V  
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Name:

Address:

City, State Zip Code:

Phone #:

Email Address:

Contact Name:

Contact Email:

Vendor Customer (VC) #:

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Name:

Address:

City, State Zip Code:

Phone #:

Email Address:

Contact Name:

Contact Email:

Vendor Customer (VC) #:

## FOR INFORMATION CALL:

Nancy Brownlee  
(502) 782-0358

## ONLINE BIDDING PROHIBITED

Yes

## OWNERSHIP TYPE:

☐ Sole Proprietorship ☐ Partnership ☐ Corporation

SIGNATURE OF AUTHORIZED AGENT IS REQUIRED UNLESS RESPONSE IS SUBMITTED ELECTRONICALLY

FAILURE TO SIGN SHALL RENDER THE BID INVALID.

Signature X \_\_\_\_\_ FEIN# \_\_\_\_\_ DATE \_\_\_\_\_

All offers subject to all terms and conditions contained in this solicitation.

## Line Items

Line Group: Default

Line	CL Description	Due Date	Quantity	Unit Issue	Unit Cost	Line Total Or Contract Amt
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1 Frankfort Office Build to Suit Project  
RFP#082514

Comm Code	Comm Description	Manufacturer	Model #	Man Part #
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97100 REAL PROPERTY RENTAL OR  
LEASE

**Extended Description**

Build to Suit or Alternatively, a lease-purchase agreement for a state office building with the successful offeror to finance, design, develop, construct, maintain and lease to the Commonwealth an office building accomodating 1300 employees (min of 334,000 gross square feet) and related infrastructure.

B I L L T O	421083 FAC FSS REAL PROPERTIES 403 WAPPING STREET BUSH BLDG 3RD FLOOR FRANKFORT KY 40601-2607 US	S H I P T O	
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1400000461	<b>Document Phase</b> Final	<b>Document Description</b> Frankfort Office Build-to-Suit RFP#082514	<b>Page 3</b> of 3
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To access the RFP document, click on the attachments button and download the attachments.

# Exhibit B

## Wage Rates

*(for informational purposes only)*

## ERRATUM

Refer to the Locality Number and Determination Number listed below published by the Kentucky Labor Cabinet, Division of Employment Standards, Apprenticeship and Mediation dated June 20, 2013.

Locality Number 007 – Anderson, Franklin & Woodford Counties

Determination Number CR 8-007

### DELETE:

Carpenter	BASE RATE	\$21.23
	FRINGE BENEFITS	12.40
Piledriver	BASE RATE	\$21.73
	FRINGE BENEFITS	12.40

### INSERT:

Carpenter	BASE RATE	\$21.98
	FRINGE BENEFITS	12.70
Piledriver	BASE RATE	\$22.48
	FRINGE BENEFITS	12.70

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Anthony Russell, Commissioner  
Department of Workplace Standards  
Kentucky Labor Cabinet  
Frankfort, KY 40601

This 27<sup>TH</sup> day of June, 2013

KENTUCKY LABOR CABINET  
PREVAILING WAGE DETERMINATION  
CURRENT REVISION  
LOCALITY NO. 007

Determination No. CR-8-007

Date of Determination: June 20, 2013

PROJECT NO. 037-B-00472-13-8

  x   BLDG        HH

This schedule of the prevailing rate of wages for Locality No. 007, which includes Anderson, Franklin & Woodford Counties, has been determined in accordance with the provisions of KRS 337.505 to 337.550. This determination shall be referred to as Prevailing Wage Determination No. CR-8-007 .

Apprentices shall be permitted to work as such subject to Administrative Regulation 803 KAR 1:010. Copies of this regulation will be furnished upon request to any interested person.

Overtime is to be computed at not less than one and one-half (1 1/2) times the indicated BASE RATE for all hours worked in excess of eight (8) per day, and/or in excess of forty (40) per week. However, KRS 337.540 permits an employee and employer to agree, in writing, that the employee will be compensated at a straight time base rate for hours worked in excess of eight (8) hours in any one calendar day, but not more than ten (10) hours worked in any one calendar day, if such written agreement is prior to the over eight (8) hours in a calendar day actually being worked, or where provided for in a collective bargaining agreement. The fringe benefit rate is to be paid for each hour worked at a straight time rate for all hours worked. Fringe benefit amounts are applicable for all hours worked except when otherwise noted. Welders will receive rate for craft in which welding is incidental.

No laborer, workman or mechanic shall be paid at a rate less than that of the General Laborer except those classified as bona fide apprentices registered with the Kentucky State Apprenticeship Supervisor unless otherwise specified in this schedule of wage rates.

NOTE: The type of construction shall be determined by applying the following definitions.

BUILDING CONSTRUCTION

Building construction is the construction of sheltered enclosures with walk-in access for the purpose of housing persons, machinery, equipment, or supplies. It includes all construction of such structures, the installation of utilities and the installation of equipment, both above and below grade level, as well as incidental grading, utilities and paving.

HIGHWAY CONSTRUCTION

Highway construction includes the construction, alteration or repair of roads, streets, highways, runways, taxiways, alleys, trails, paths, parking areas, and other similar projects not incidental to building or heavy construction. It includes all incidental construction in conjunction with the highway construction project.

HEAVY CONSTRUCTION

Heavy projects are those projects that are not properly classified as either "building" or "highway". For example, dredging projects, water and sewer line projects, dams, flood control projects, sewage treatment plants and facilities, and water treatment plants and facilities are considered heavy.



Anthony Russell, Commissioner  
Department of Workplace Standards  
Kentucky Labor Cabinet



<b>ASBESTOS/INSULATION WORKERS:</b>		BASE RATE	\$24.92
		FRINGE BENEFITS	11.80

<b>BOILERMAKERS:</b>		BASE RATE	\$24.65
		FRINGE BENEFITS	12.94

<b>BRICKLAYERS:</b>		BASE RATE	\$24.14
Bricklayers:		FRINGE BENEFITS	11.22

Layout & Sawmen:		BASE RATE	\$24.39
		FRINGE BENEFITS	11.22

Refractory/Acid/Glass:		BASE RATE	\$25.37
		FRINGE BENEFITS	11.22

<b>CARPENTERS:</b>		BASE RATE	<del>\$21.23</del>
Carpenters:	BUILDING	FRINGE BENEFITS	<del>12.40</del>

Piledriver:	BUILDING	BASE RATE	<del>\$21.73</del>
		FRINGE BENEFITS	<del>12.40</del>

Carpenters:	HEAVY & HIGHWAY	BASE RATE	\$26.90
		FRINGE BENEFITS	14.50

Pildrivermen:	HEAVY & HIGHWAY	BASE RATE	\$27.15
		FRINGE BENEFITS	14.50

Divers:	HEAVY & HIGHWAY	BASE RATE	\$40.73
		FRINGE BENEFITS	14.50

<b>CEMENT MASONS:</b>		BASE RATE	\$ 17.50
		FRINGE BENEFITS	4.95

<b>ELECTRICIANS:</b>		BASE RATE	\$29.48
		FRINGE BENEFITS	14.36

When workmen are required to work from bosun chairs, trusses, stacks, tanks, scaffolds, catwalks, radio and T.V. towers, structural steel (open, unprotected, unfloored raw steel) and bridges or similar hazardous locations where workmen are subject to a direct fall: 50 feet to 75 feet – add 25% above the workman's hourly rate, over 75 feet add 50% above workman's hourly rate. No premium shall be paid on work performed using JLGs, bucket trucks or other similar elevated mechanized work platforms up to 75 feet above the surface upon which the platform sits.

LINEMAN:	HEAVY/HIGHWAY	BASE RATE	\$31.86
		FRINGE BENEFITS	11.63

EQUIPMENT OPERATOR	HEAVY/HIGHWAY	BASE RATE	\$28.48
		FRINGE BENEFITS	10.94

**ELECTRICIANS: CONTINUED**

GROUNDMAN	HEAVY/HIGHWAY	BASE RATE	\$18.87
		FRINGE BENEFITS	9.03

**ELEVATOR CONSTRUCTORS:**

BASE RATE	\$24.52
FRINGE BENEFITS	7.76

**GLAZIERS:**

ANDERSON COUNTY:

BASE RATE	\$10.00
FRINGE BENEFITS	0.00

FRANKLIN COUNTY:

BASE RATE	\$18.01
FRINGE BENEFITS	3.88

WOODFORD COUNTY:

BASE RATE	\$15.45
FRINGE BENEFITS	0.00

**IRONWORKERS:**

BASE RATE	\$26.47
FRINGE BENEFITS	19.56

**LABORERS / BUILDING:**

BUILDING GROUP 1: General laborers, asbestos abatement laborer, toxic waste removal laborer, water boys, tool room checker, carpenter tenders, (civil engineer helper, rodman, grade checker, excluding all field work performed by Engineering Firms), concrete pouring and curing, concrete forms stripping and wrecking, hand digging and backfilling of ditches, clearing of right of ways and building sites, wood sheeting and shoring, signalman for concrete bucket and general cleaning, and environmental laborer - nuclear, radiation, toxic and hazardous waste - Level D:

BUILDING	*BASE RATE	\$20.41
	FRINGE BENEFITS	10.69

BUILDING GROUP 2: All air tool operators, air track drills, asphalt rakers, tampers, batchers plant and scale man, chain saw, concrete saw, cutter/burner, electric hand grinder, all electric bush and chipping hammers, flagmen, forklift operators, form setter (street or highway), metal form setters, heaters, mesh handlers on walkways, streets and roadways outside building, gunnite laborers, hand spiker, introflax burning rod, joint makers, mason tender, multi-trade tender, pipe layers, plaster tender, powderman helpers, power driven Georgia buggies, power posthole diggers, railroad laborers, sandblaster laborers, scow man and deck hand, signal man, sweeper and cleaner machines, vibrator operators, vibrator/tamper operated by hand or remote control, walk behind trenching machines, mortar mixer machines, water pumpmen, and environmental laborers - nuclear, radiation, toxic and hazardous waste - Level C:

BUILDING	*BASE RATE	\$20.81
	FRINGE BENEFITS	10.69

BUILDING GROUP 3: Asphalt paver screwman, gunnite nozzle man and gunnite nozzle machine operator, sand blaster nozzle man, concrete or grout pumpman, plaster pumpman:

BUILDING	*BASE RATE	\$21.01
	FRINGE BENEFITS	10.69

BUILDING GROUP 4: Powderman and blaster, and environmental laborer - nuclear, radiation, toxic and hazardous waste - Level B:

BUILDING	*BASE RATE	\$21.11
	FRINGE BENEFITS	10.69

**LABORERS / BUILDING: CONTINUED**

BUILDING GROUP 5: Caisson holes (6 ft. and over) pressure and free air including tools, and environmental laborer-nuclear, radiation, toxic and hazardous waste - Level A:

BUILDING	*BASE RATE	\$21.61
	FRINGE BENEFITS	10.69

BUILDING GROUP 6: Tunnel man and tunnel sand miner, cofferdam (pressure and free air), sand hog or mucker (pressure or free air):

BUILDING	*BASE RATE	\$21.91
	FRINGE BENEFITS	10.69

**\*Employees handling chemically treated materials which are harmful to the skin shall receive an additional \$.50 above base rate. Employees working on high work such as towers or smoke stacks, or any type of work fifty (50) feet above the ground or a solid floor shall receive \$1.00 above base rate. Employees working on boilers, kilns, melting tanks, furnaces, or when refractory is done using live fires, drying fires, heatups or any hot work shall receive \$2.00 above base rate.**

**LABORERS / HEAVY & HIGHWAY:**

HEAVY HIGHWAY GROUP 1: Aging and curing of concrete (any mode or method), asbestos abatement worker, asphalt plant laborers, asphalt laborers, batch truck dumpers, carpenter tenders, cement mason tenders, cleaning of machines, concrete laborers, demolition laborers, dredging laborers, drill helper, environmental laborer - nuclear, radiation, toxic and hazardous waste - Level D, flagmen, grade checkers, all hand digging and hand back filling, highway marker placers, landscaping laborers, mesh handlers and placers, puddler, railroad laborers, rip-rap and grouters, right of way laborers, sign, guard rail and fence installers (all types), signal men, sound barrier installer, storm and sanitary sewer laborers, swamper, truck spotters and dumpers, and wrecking of concrete forms, general cleanup:

HEAVY & HIGHWAY	BASE RATE	\$21.15
	FRINGE BENEFITS	11.41

HEAVY HIGHWAY GROUP 2: Batter board men (sanitary and storm sewer), brickmason tenders, mortar mixer operator, scaffold builders, burner and welder, bushhammers, chain saw operator, concrete saw operators, deckhand scow man, dry cement handlers, environmental laborers - nuclear, radiation, toxic and hazardous waste - Level C, forklift operators for masonry, form setters, green concrete cutting, hand operated grouter and grinder machine operator, jack hammers, lead paint abatement, pavement breakers, paving joint machine, pipe layers-laser operators (non-metallic), plastic pipe fusion, power driven Georgia buggy or wheelbarrow, power post hole diggers, precast manhole setters, walk-behind tampers, walk-behind trenchers, sand blasters, concrete chippers, surface grinders, vibrator operators, wagon drillers:

HEAVY & HIGHWAY	BASE RATE	\$21.40
	FRINGE BENEFITS	11.41

HEAVY HIGHWAY GROUP 3: Asphalt lutean and rakers, gunnite nozzleman, gunnite operators and mixers, grout pump operator, side rail setters, rail paved ditches, screw operators, tunnel laborers (free air), and water blasters:

HEAVY & HIGHWAY	BASE RATE	\$21.45
	FRINGE BENEFITS	11.41

HEAVY HIGHWAY GROUP 4: Caisson workers (free air), cement finishers, environmental laborer - nuclear, radiation, toxic and hazardous waste - Levels A and B, miners and drillers (free air), tunnel blasters, and tunnel muckers (free air), directional and horizontal boring, air track driller (all types), powder man and blaster:

HEAVY & HIGHWAY	BASE RATE	\$22.05
	FRINGE BENEFITS	11.41

**MARBLE, TILE & TERRAZZO:**

Finishers:	BASE RATE	\$15.42
	FRINGE BENEFITS	5.42
Setters:	BASE RATE	\$22.64
	FRINGE BENEFITS	6.10

**MILLWRIGHTS:**

BASE RATE	\$24.18
FRINGE BENEFITS	15.67

**OPERATING ENGINEERS / BUILDING:**

**NCCCO OR OECF CERTIFIED**

BUILDING CLASS A-1: Crane, dragline, hoist (1 drum when used for stack or chimney construction or repair); hoisting engineer (2 or more drums), orangepeel bucket, overhead crane, piledriver, truck crane, tower crane, hydraulic crane:

BUILDING	BASE RATE	\$27.90
	FRINGE BENEFITS	13.90

BUILDING CLASS A: Articulating dump, auto patrol, batcher plant, bituminous paver, cableway, central compressor plant, clamshell, concrete mixer (21 cu. ft. or over), concrete pump, crane, crusher plant, derrick, derrick boat, directional boring machine, ditching and trenching machine, dragline, dredge operator, dredge engineer, elevating grader and all types of loaders, forklift (regardless of lift height), GPS systems (on equipment within the classification), hoe type machine, hoist (1 drum when used for stack or chimney construction or repair), hoisting engineer (2 or more drums), laser or remote controlled equipment (within the classification), locomotive, motor scraper, carry-all scoop, bulldozer, heavy duty welder, mechanic, orangepeel bucket, piledriver, power blade, motor grader, roller (bituminous), scarifier, shovel, tractor shovel, truck crane, winch truck, push dozer, highlift, all types of boom cats, self contained core drill, hopto, tow or push boat, a-frame winch truck, concrete paver, gradeall, hoist, hyster, pumpcrete, Ross carrier, boom, tail boom, rotary drill, hydro hammer, mucking machine, rock spreader attached to equipment, scoopmobile, KeCal loader, tower cranes (French, German and other types), hydrocrane, backfiller, gurries, sub-grader, tunnel mining machines including moles, shields, or similar types of tunnel mining equipment:

BUILDING	*BASE RATE	\$26.84
	FRINGE BENEFITS	13.90

**\*Operators on cranes with boom one-hundred fifty feet (150') and over including jib, shall receive seventy-five cents (\$.75) above base rate. All cranes with piling leads will receive \$.50 above base rate regardless of boom length**

BUILDING CLASS B: All air compressors (over 900 CFM), bituminous mixer, joint sealing machine, concrete mixer (under 21 cu. ft.), form grader, roller (rock), tractor (50 HP and over), bull float, finish machine, outboard motor boat, flexplane, fireman, boom type tamping machine, truck crane oiler, greaser on grease facilities servicing heavy equipment, switchman or brakeman, mechanic helper, whirley oiler, self-propelled compactor, tractair and road widening trencher and farm tractor with attachments (except backhoe, highlift and endloader), elevator (regardless of ownership when used for hoisting any building material), hoisting engineer (1-drum or buck hoist), firebrick (masonry excluded), well points, grout pump, throttle-valve man, tugger, electric vibrator compactor, and caisson drill helper:

BUILDING	BASE RATE	\$23.94
	FRINGE BENEFITS	13.90

BUILDING CLASS C: Bituminous distributor, cement gun, conveyor, mud jack, paving joint machine, roller (earth), tamping machine, tractors (under 50 HP), vibrator, oiler, concrete saw, burlap and curing machine, hydro-seeder, power form handling equipment, deckhand steersman, hydraulic post driver, and drill helper:

BUILDING	BASE RATE	\$23.13
	FRINGE BENEFITS	13.90

**OPERATING ENGINEERS / HEAVY/HIGHWAY:**

**NCCCO OR OECP CERTIFIED**

HEAVY HIGHWAY CLASS A-1: Cableway, carry deck crane, cherry picker, clamshell, crane, derrick, derrick boat, dragline, hoist engine (2 or more drums), hydraulic boom truck, hydrocrane, orangepeel bucket, overhead crane, piledriver, rough terrain crane, tower cranes (French, German & other types), truck crane:

HEAVY HIGHWAY	BASE RATE	\$28.40
	FRINGE BENEFITS	13.40

HEAVY HIGHWAY CLASS A: A-frame winch truck, auto patrol, backfiller, batcher plant, bituminous paver, bituminous transfer machine, all types of boom cats, bulldozer, cableway, carry-all scoop, carry deck crane, central compressor plant operator, clamshell, concrete mixer (21 cu. ft. or over), concrete paver, truck-mounted concrete pump, core drills, crane, crusher plant, derrick, derrick boat, ditching and trenching machine, dragline, dredge operator, dredge engineer, earth movers, elevating grader and all types of loaders, grade-all, guries, heavy equipment robotics operator/mechanic, high lift, hoe-type machine, hoist (two or more drums), hoisting engine (two or more drums), horizontal directional drill operator, hydraulic boom truck, hydrocrane, hyster, KeCal loader, Letourneau, Locomotive, mechanic, mechanically operated laser screed, mechanic welder, mucking machine, motor scraper, orangepeel bucket, piledriver, power blade, pumpcrete push dozer, rock spreader attached to equipment, all rotary drills, roller (bituminous), scarifier, scoopmobile, shovel, side boom, subgrader, tallboom, telescoping type forklift, tow or push boat, tower cranes (French, German and other types) tractor shovel and truck crane, tunnel mining machines including moles, shields, or similar types of tunnel mining equipment:

HEAVY & HIGHWAY	BASE RATE	\$27.35
	FRINGE BENEFITS	13.40

**Operators on cranes with booms one hundred fifty feet (150') and over including jib shall receive \$.50 above base rate.**

HEAVY HIGHWAY CLASS B: All air compressors (over 900 cu. ft. per min.), bituminous mixer, boom type tamping machine, bull float, concrete mixer (under 21 cu. ft.), dredge engineer, electric vibrator compactor/self-propelled compactor, elevator (one drum or buck hoist), elevator (regardless of ownership when used to hoist building material), finish machine, firemen, flexplane, forklift (regardless of lift height), form grader, hoist (one drum), joint sealing machine, mechanic helper, outboard motor boat, power sweeper (riding type), roller (rock), ross carrier, skid mounted or trailer mounted concrete pumps, skid steer machine with all attachments, switchman or brakeman, throttle valve man, Tract air and road widening trencher, tractor (50 HP and over), truck crane oiler, tugger, welding machine, well points, and whirley oiler:

HEAVY & HIGHWAY	BASE RATE	\$24.87
	FRINGE BENEFITS	13.40

HEAVY HIGHWAY CLASS B2: Greaser on grease facilities servicing heavy equipment, all off road material handling equipment, including articulating dump trucks:

HEAVY & HIGHWAY	BASE RATE	\$25.26
	FRINGE BENEFITS	13.40

HEAVY HIGHWAY CLASS C: Bituminous distributor, burlap and curing machine, caisson drill and core drill helper (track or skid mounted), cement gun, concrete saw, conveyor, deckhand oiler, grout pump, hydraulic post driver, hydro seeder, mud jack, oiler, paving joint machine, power form handling equipment, pump, roller (earth), steermen, tamping machine, tractors (under 50 H.P.) and vibrator:

HEAVY & HIGHWAY	BASE RATE	\$24.60
	FRINGE BENEFITS	13.40

**\*\*Operators on cranes with booms one hundred fifty feet (150') and over including jib shall receive \$.50 above base rate.**

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**PAINTERS:**

Brush & Roller:	BUILDING	BASE RATE	\$14.35
		FRINGE BENEFITS	3.87
Spray& Sandblast:	BUILDING	BASE RATE	\$14.85
		FRINGE BENEFITS	3.87
Brush & Roller:	HEAVY & HIGHWAY	BASE RATE	\$18.20
		FRINGE BENEFITS	5.08
Drywall Finishers & Plasterers:	HEAVY & HIGHWAY	BASE RATE	\$18.45
		FRINGE BENEFITS	5.08
Spray, Sandblast, Power Tools, Waterblast, Steam Cleaning; Brush & Roller of Mastics, Creosotes, Kwinch Koate and Coal Tar Epoxy:	HEAVY & HIGHWAY	BASE RATE	\$19.20
		FRINGE BENEFITS	5.08
Spray of Mastics, Creosotes, Kwinch Koate and Coal Tar Epoxy:	HEAVY & HIGHWAY	BASE RATE	\$20.20
		FRINGE BENEFITS	5.08

**PLASTERERS:**

BASE RATE	\$20.65
FRINGE BENEFITS	5.85

**PLUMBERS & PIPEFITTERS:**

BASE RATE	\$32.00
FRINGE BENEFITS	16.29

**ROOFERS: (Excluding Metal Roofs)**

BASE RATE	\$17.90
FRINGE BENEFITS	5.73

**SHEETMETAL WORKERS: (Including Metal Roofs)**

BASE RATE	\$28.30
FRINGE BENEFITS	17.62

**SPRINKLER FITTERS:**

BASE RATE	\$29.55
FRINGE BENEFITS	17.22

**TRUCK DRIVERS / BUILDING:**

Truck Helper and Warehouseman:	BUILDING	BASE RATE	\$19.05
		*FRINGE BENEFITS	11.08
Driver - 3 tons and under, Greaser, Tire Changer and Mechanic Helper:	BUILDING	BASE RATE	\$19.17
		*FRINGE BENEFITS	11.08
Driver - over 3 tons, Drivers, Semi-Trailer or Pole Trailer; Dump Trucks, Tandem Axle; Farm Tractor when used to pull building material or equipment:	BUILDING	BASE RATE	\$19.28
		*FRINGE BENEFITS	11.08

Drivers, Concrete Mixer Trucks (all types, hauling on job sites only); Truck Mechanics:

BUILDING	BASE RATE	\$19.35
	*FRINGE BENEFITS	11.08

Drivers, Euclid and other Heavy Earth Moving Equipment and Low Boy, Articulating End Dump, Winch Truck and A-Frame Truck and Monorail Truck when used to transport building materials, Forklift Truck when used inside warehouse or storage area:

BUILDING	BASE RATE	\$19.45
	*FRINGE BENEFITS	11.08

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**TRUCK DRIVERS/ HEAVY & HIGHWAY:**

Mobile batch truck helper: HEAVY & HIGHWAY

BASE RATE	\$16.57
**FRINGE BENEFITS	7.34

Greaser, tire changer and mechanic helper:

HEAVY & HIGHWAY

BASE RATE	\$16.68
**FRINGE BENEFITS	7.34

Driver-single axle dump and flatbed truck, semi-trailer or pole trailer when used to pull building materials and equipment, tandem axle dump truck, driver of distributors, driver on mixer trucks(all types) & truck mechanic:

HEAVY & HIGHWAY

BASE RATE	\$16.86
**FRINGE BENEFITS	7.34

Driver-Euclid and other heavy earthmoving equipment and low-boy, articulator, cat truck, 5-axle wheel, winch truck and A-Frame truck when used in transporting materials, Ross Carrier, forklift truck when used to transport building materials, driver on pavement breakers:

HEAVY & HIGHWAY

BASE RATE	\$16.96
**FRINGE BENEFITS	7.34

**\*\*TRUCK DRIVER FRINGE BENEFITS apply to employees who have been employed a minimum of twenty (20) calendar days within any ninety (90) consecutive day period of that employer.**

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END DOCUMENT  
CR-8-007  
JUNE 20, 2013



Steven L. Beshear  
Governor

**KENTUCKY LABOR CABINET**  
DEPARTMENT OF WORKPLACE STANDARDS  
DIVISION OF EMPLOYMENT STANDARDS,  
APPRENTICESHIP & MEDIATION  
1047 US Hwy 127 S - Suite 4  
Frankfort, Kentucky 40601  
Phone: (502) 564-3534  
Fax (502) 696-1897  
www.labor.ky.gov

Larry Roberts  
Secretary

Anthony Russell  
Commissioner

May 30, 2014

Nancy Brownlee  
Div. of Real Properties  
403 Wapping St. 1st Floor  
Frankfort KY 40601

Re: Finance Cabinet, Office Building - Separate Lab Space

Advertising Date as Shown on Notification: June 1, 2014

Dear Nancy Brownlee:

This office is in receipt of your written notification on the above project as required by KRS 337.510 (1).

I am enclosing a copy of the current prevailing wage determination number CR 8-007, dated June 20, 2013 for FRANKLIN County. This schedule of wages shall be attached to and made a part of the specifications for the work, printed on the bidding blanks, and made a part of the contract for the construction of the public works between the public authority and the successful bidder or bidders.

The determination number assigned to this project is based upon the advertising date contained in your notification. There may be modifications to this wage determination prior to the advertising date indicated. In addition, if the contract is not awarded within 90 days of this advertising date or if the advertising date is modified, a different set of prevailing rates of wages may be applicable. It will be the responsibility of the public authority to contact this office and verify the correct schedule of the prevailing rates of wages for use on the project. Your project number is as follows: 037-B-00472-13-8, Building

Sincerely,

Anthony Russell  
Commissioner





# Exhibit C

Project Site Plan (approx. 33.998 acres)

Survey w/Topo

HMB, Joe Grider



EAST-WEST CONNECTOR - KY 676

**SURVEY NOTES:**

1. THE ORIGINAL PLAT OF THIS SURVEY IS LOCATED IN CUBINET 2, PAGE 34 IN THE OFFICE OF THE FRANKLIN COUNTY CLERK.
2. ALL IRON PINS SET BY THIS SURVEY ARE 1/2" REBAR 18" YELLOW PLASTIC CAP IMPRINTED WITH "J" ORDER FILE # 2889.
3. THE BEARINGS ON THIS PLAT ARE BASED ON GRID NORTH ESTABLISHED BY REAL-TIME KINEMATIC GPS SURVEY FROM FRANKFORT ELECTRIC & WATER PLANT BOARD MONUMENT FEMSP 1371 POINTS IN KENTUCKY STATE PLANE COORDINATES, NORTH ZONE 18S, DATUM 1983.
4. OWNERS OF THIS PROPERTY, IF THE COMMONWEALTH OF KENTUCKY, THE SOURCE TITLE IS RECORDED IN DEED BOOK 372, PAGE 613 IN THE OFFICE OF THE FRANKLIN COUNTY CLERK.
5. THERE ARE NO MINIMUM BUILDING SET BACKS FOR THE "20" ZONE DISTRICT.

**REVIEW OF FRANKFORT PLANT BOARD UTILITIES:**

THE FRANKFORT PLANT BOARD UTILITIES ARE HEREIN IDENTIFIED. WE HAVE REVIEWED THE PLANT BOARD UTILITIES AND THE EXISTING AND PROPOSED UTILITY EASEMENTS FOR NEW CONSTRUCTION AND MAINTENANCE.

DATE: FIB - WATER

DATE: FIB - GULF/ALCOHOL/COGNAC

DATE: FIB - LIQUOR

DATE: DISK IN CONCRETE FOUND

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**CERTIFICATE OF SUBDIVISION ENGINEER**

I, \_\_\_\_\_, a duly licensed Professional Engineer in the State of Kentucky, do hereby certify that the foregoing plat is a true and correct representation of the land described therein, and that the same has been surveyed and divided into the lots and parcels shown thereon, and that the same are capable of being separately conveyed and owned.

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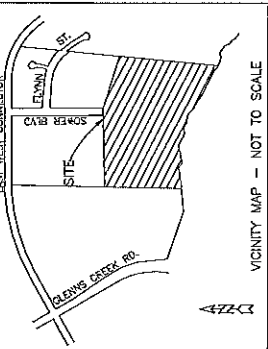
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EAST-WEST CONNECTOR



VICINITY MAP - NOT TO SCALE

**CURVETABLE**

NUMBER	RADIUS	ARC LENGTH	CURVATURE	CHORD LENGTH
C1	300.00	312.00	S 20°34'31" W	300.16
C2	425.00	404.00	N 20°34'31" E	392.51

**CERTIFICATION OF THE APPROVAL OF STREETS AND UTILITIES**

I, \_\_\_\_\_, a duly licensed Professional Engineer in the State of Kentucky, do hereby certify that the foregoing plat is a true and correct representation of the land described therein, and that the same has been surveyed and divided into the lots and parcels shown thereon, and that the same are capable of being separately conveyed and owned.

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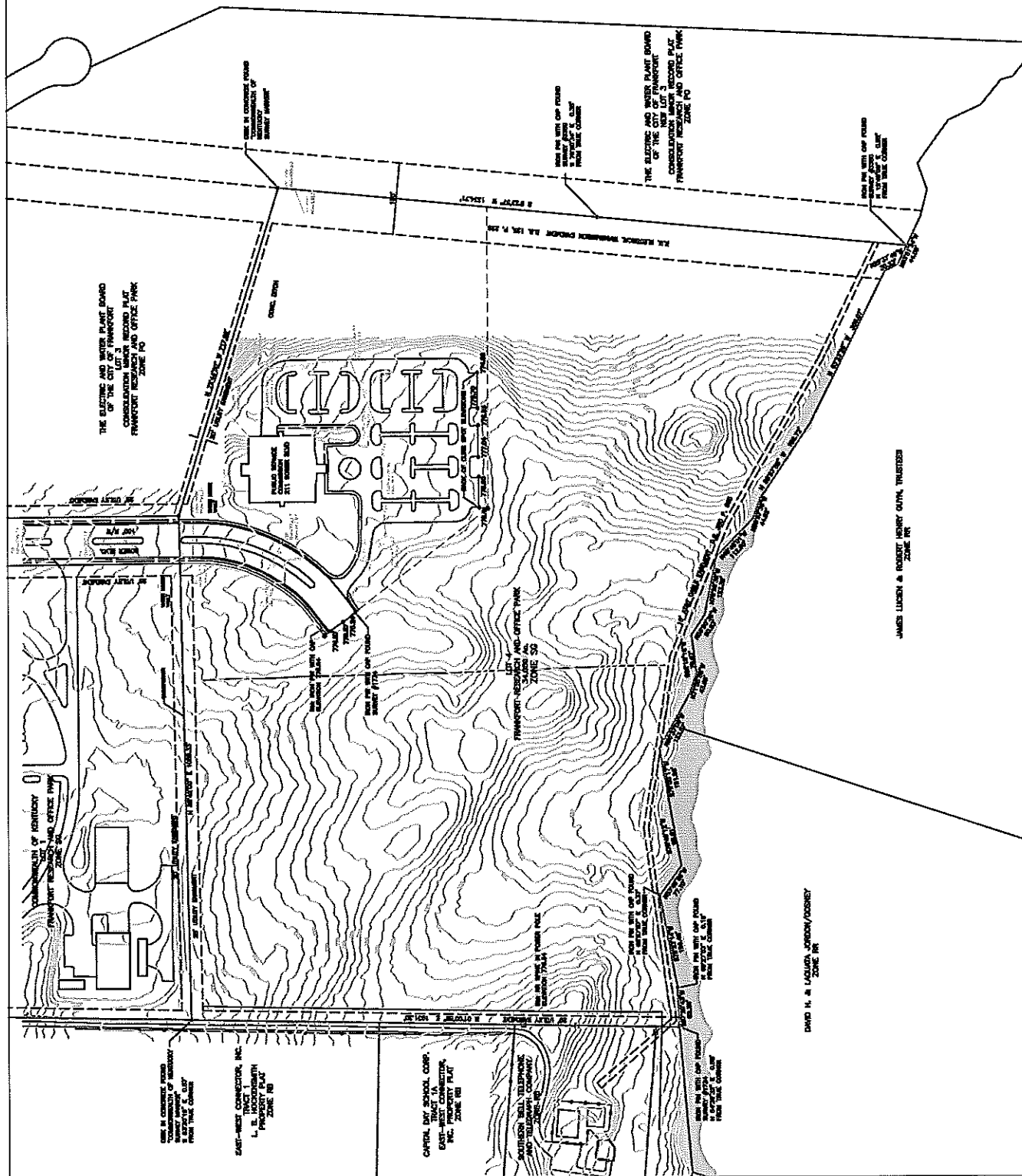
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## Exhibit D

Draft Deed between Commonwealth  
(Grantor)

And

Successful Offeror (Grantee)

## DEED OF CONVEYANCE

**THIS DEED OF CONVEYANCE**, made and entered into this \_\_\_\_ day of \_\_\_\_\_, 2014, by and between the **COMMONWEALTH OF KENTUCKY**, by and through Lori H. Flanery, Secretary, **FINANCE AND ADMINISTRATION CABINET**, pursuant to K.R.S. 45A and 56, hereinafter referred to as the "Grantor" or the "Commonwealth", and **successful offeror**, with a mailing address and in care tax address of \_\_\_\_\_, hereinafter referred to as the "Grantee."

### WITNESSETH:

**WHEREAS**, the Grantee is the successful bidder in response to a build-to-suit request for proposals issued by the Grantor pursuant to K.R.S. 56.8161, et. seq.;

**WHEREAS**, as a part of a build-to-suit project, K.R.S. 56.820 requires the Commonwealth of Kentucky to convey the property being utilized for the build-to-suit project to the successful bidder with such property to be leased back to the Commonwealth;

**WHEREAS**, the afore-mentioned build-to-suit project and conveyance of the property to the Grantee under the terms and conditions set forth herein is in the public interest and the best interest of the Commonwealth;

**WHEREAS**, through Official Order No. \_\_\_\_\_, the Secretary of the Finance and Administration Cabinet has approved the transfer of land at Sower Boulevard, Frankfort, Franklin County, KY, described herein, to the Grantee; and,

**NOW, THEREFORE**, for and in consideration of the foregoing and other good and valuable consideration (but no monetary consideration), the receipt of sufficiency of such consideration being hereby acknowledged by the Grantor, the Grantor hereby does

grant, transfer and convey unto the Grantee, its successors and assigns, the following 33.998 acres of property located in Franklin County, Kentucky, and more particularly described as follows:

**BOUNDARY DESCRIPTION**  
Commonwealth of Kentucky

Description

**TO HAVE AND TO HOLD** said property right unto the Grantee, its successors and assigns, in fee simple, with all rights and privileges thereunto belonging, with covenants of General Warranty.

The Grantor and Grantee hereto further mutually covenant and agree that upon expiration or termination of a certain lease agreement being executed by the Grantor and Grantee hereto simultaneously with this Deed of Conveyance, the Grantee herein shall re-convey the property described herein to the Commonwealth of Kentucky by Deed of Conveyance with Covenant of General Warranty with the Grantee herein to receive as consideration such amount calculated under such lease agreement.

### **CONSIDERATION CERTIFICATE**

The Grantor and Grantee hereby certify that the consideration stated herein is the full and actual consideration being paid for the property transferred hereby. The Grantee joins this deed for the purpose of certifying the consideration paid. The estimated fair market value of the property conveyed herein, according to the records maintained by the Franklin County Property Valuation Administrator, is \$\_\_\_\_\_.

**IN TESTIMONY WHEREOF**, Lori H. Flanery, Secretary of the Finance and Administration Cabinet, acting for and on behalf of the Commonwealth of Kentucky, Grantor, and successful offeror, Grantee, pursuant to the authority granted by KRS Chapters 45A and 56, have executed this Deed of Conveyance, including the foregoing Consideration Certificate of Grantor and Grantee, as of this \_\_\_\_ day of \_\_\_\_\_ 2014.

**GRANTOR:**  
**COMMONWEALTH OF KENTUCKY**  
**Finance and Administration Cabinet,**  
**Pursuant to K.R.S. 45A.045**

**By:** \_\_\_\_\_  
**Lori H. Flanery, Secretary**  
**Finance and Administration Cabinet**

**GRANTEE:**  
**Successful offeror**

\_\_\_\_\_  
**By: successful offeror**



COMMONWEALTH OF KENTUCKY )  
 )  
COUNTY OF FRANKLIN )

[illegible]

COMMONWEALTH OF KENTUCKY )  
 )  
COUNTY OF )

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Journal compilation © 2006 Blackwell Publishing Ltd

4

This Instrument Prepared By:

---

Patrick McGee, Attorney  
Finance and Administration Cabinet  
Office of General Counsel  
Room 392, Capital Annex  
Frankfort, Kentucky 40601  
(502) 564-6660

## Exhibit E

Temporary Construction Easement and

Ingress/Egress Easement

Grantor: Commonwealth

Grantee: Successful Offeror

**COMMONWEALTH OF KENTUCKY  
FINANCE AND ADMINISTRATION CABINET  
DEED OF EASEMENT**

KNOW ALL YE TO WHOM THESE PRESENTS SHALL COME, that the **COMMONWEALTH OF KENTUCKY**, acting by and through Lori H. Flanery, Secretary of the Finance and Administration Cabinet, as provided by Chapters 45A and 56 of the Kentucky Revised Statutes, pursuant to Official Order No. \_\_\_\_\_, for and on behalf of the **FINANCE AND ADMINISTRATION CABINET**, Room #310, Capitol Annex, Frankfort, Kentucky 40601, hereinafter referred to as "Grantor" or the "Commonwealth," and for the public benefit to be derived herefrom, does hereby grant and convey unto **SUCCESSFUL OFFEROR**, with a mailing and in care of tax address of \_\_\_\_\_, its successors and assigns forever, hereinafter referred to as the "Grantee," a \_\_\_' easement as follows:

Description of Easement

Also granted herein is a 100' buffer surrounding Property and identified as "Granted 100' Private Access Easement" for the constructing, reconstructing, installing, inspecting, improving, expanding, removing, rebuilding, replacing and repairing a minimum 334,000 square foot office structure, and all other appurtenances thereto.

Both the \_\_\_' easement and the \_\_\_' easement are more particularly described below:

Access to the above described Tract of land is by Sower Boulevard from the East-West Connector (KY \_\_\_\_\_) and is described as follows:

**GRANTED PRIVATE ACCESS EASEMENT**  
Centerline Description

LEGAL DESCRIPTION

The foregoing easement conveyed herein being a part of the same property as that conveyed to the Commonwealth of Kentucky, for the benefit of the Commonwealth of Kentucky, Finance and Administration Cabinet, from the City of Frankfort, which deed is recorded in Deed Book \_\_\_\_\_, Page \_\_\_\_\_, in the Franklin Clerk's office, Frankfort, Kentucky.

Grantee acknowledges that this conveyance is subject to any other easements or restrictions as to the use of said property, whether recorded or unrecorded, which may have been previously granted by the Commonwealth or its predecessors in interest.

Grantee also agrees that it will repair, replace, or otherwise be liable to the Commonwealth for any and all damages that may be caused directly or indirectly by or resulting from the exercise of the Grantee's rights granted hereunder. Grantee shall not be responsible for damages that may be caused by the Commonwealth or its agents. For purposes of this paragraph, damages shall be defined as all reasonable attorney fees incurred by the Grantor as a result of the exercise of the Grantee's rights granted hereunder.

As a condition hereof, the Grantee shall restore the surface of the ground, as nearly as practicable, to the same condition as it was prior to the Grantee's construction, extension, installation, inspection, repair, maintenance, removal, replacement, reconstruction and/or enlargement of its facilities. The restoration of the surface shall include, but shall not be limited to, the reseeding and/or resodding of any unpaved portion thereof disturbed in the course of the aforementioned activity.

Grantee further agrees that if the Commonwealth has authorized others to locate utility lines within the limits of the above-described easement that Grantee shall not disturb these lines and shall indemnify the grantee(s) of such rights against any damage to their utility lines within the area of said easement, which is the result of the Grantee's exercise of the rights granted herein.

The rights hereby granted shall be deemed non-exclusive to the Grantee and the Commonwealth reserves the right, at its option and for its convenience, to grant to others similar rights of easement and right-of-way within the limits of the above-described easement; provided,

however, that the Commonwealth agrees to forebear granting any such rights within the limits of said easement that in the judgment of the Director of the Division of Engineering and Contract Administration, Finance and Administration Cabinet, will be for a use detrimental to or will adversely affect the use thereof by the Grantee; and as a condition of any such grant of easement will require that the grantee thereof agree to indemnify the Grantee hereof against any damage to its facilities located within the easement.

The Commonwealth, its successors and assigns, shall have the right to use the land within the limits of this easement in any manner not inconsistent with the rights herein described.

The Commonwealth agrees that it will forebear constructing any building or other permanent improvement over or across the right-of-way of the above-described easement, but reserves to itself the right to construct within the limits of said easement fences and temporary structures over, along or across the right-of-way of said easement, as long as the erection of said fences or other temporary structures does not substantially interfere with the Grantee's rights granted hereunder, or violate any applicable codes, statutes or regulations.

The Grantor and Grantee further hereby mutually understand and agree that in the event of the exercise of the option to purchase the leased premises or in the event the lease has been extended for the full number of years which it is agreed the same may be extended, and all rents and payments provided for in the lease have been made, the Grantee shall release the easement from the premises to the Grantor, at no cost to the Grantor and the Grantee shall have no remaining rights in the property. The Grantee further acknowledges that said Grantee must otherwise comply with all of the other relevant terms and conditions of said Lease Agreement.

TO HAVE AND TO HOLD, the above-described easement thereunto belonging, unto the Grantee, their successors and assigns, in fee simple, with covenant of General Warranty.

IN TESTIMONY WHEREOF, witness the signature of Lori H. Flanery, Secretary of the Finance and Administration Cabinet, Commonwealth of Kentucky, affixed hereto for and on behalf of said Commonwealth as authorized and provided by Chapters 45A and 56 of the Kentucky Revised Statutes, as of this \_\_\_\_ day of \_\_\_\_\_, 2014.

COMMONWEALTH OF KENTUCKY

By: \_\_\_\_\_  
Lori H. Flanery, Secretary  
Finance and Administration Cabinet

GRANTEE:

SUCCESSFUL OFFEROR

By: \_\_\_\_\_

COMMONWEALTH OF KENTUCKY )  
COUNTY OF FRANKLIN )

The foregoing Deed of Easement was acknowledged before me by Lori H. Flanery, Secretary of the Finance and Administration Cabinet, on behalf of the Commonwealth of Kentucky, pursuant to K.R.S. 45A and 56, on this \_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_

My Commission expires: \_\_\_\_\_.

COMMONWEALTH OF KENTUCKY )  
 )  
COUNTY OF \_\_\_\_\_ )

The foregoing Deed of Easement was acknowledged before me by SUCCESSFUL  
OFFEROR, on this \_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
My Commission expires: \_\_\_\_\_.

Examined:

\_\_\_\_\_  
Counsel to the Governor

THE SUBJECT EASEMENT IS APPROVED:

\_\_\_\_\_  
STEVEN L. BESHEAR, GOVERNOR  
COMMONWEALTH OF KENTUCKY

This Instrument Prepared By:

\_\_\_\_\_  
Patrick W. McGee, Attorney  
Finance and Administration Cabinet  
Room 392, Capitol Annex Building  
Frankfort, Kentucky 40601  
(502) 564-6660



# Exhibit F

## DHBC Guidance on Partial Permits

## PARTIAL PERMITS

The Building Code Official is authorized to issue a permit for any part of a building or structure before the plan complete package has been submitted. Upon request, the Building Code Official is also authorized to issue partial permits if an entire plan package has been filed but falls short of meeting the requirements for full permit.

The issuance of a partial permit is contingent upon adequate information and details having been filed to demonstrate compliance with all pertinent requirements of the Code.

## SITE / FOUNDATION

The following items are required before a Site and Foundation Permit is to be issued. Not all items will be applicable on each project. All drawings shall be dimensioned and drawn to scale.

☐ **ARCHITECT/ENGINEER**

The services of an Architect or Engineer shall be confirmed. When their services are required, the plans shall bear the seal and signature of the Architect and /or Engineer (KRS 322/323 and Table 122.1 of the KBC)

☐ **SITE PLAN**

A site plan showing the location of the building and its distance to property lines and other buildings on the same property and finished grades shall be submitted. (Section 106.2 KBC)

☐ **SITE SURVEY**

A plan illustrating the location of property lines and bearing the seal and signature of a land surveyor shall be submitted. (Section 106.2 KBC)

☐ **NOTICE:**

Information for the installation of underground sprinkler supply lines shown on the site plan is not covered under a site and foundation permit. A separate letter of approval or disapproval shall be required for this work. This work shall be performed by a Kentucky licensed sprinkler contractor. (refer to Krs 198B.600)

☐ **FOUNDATION PLAN**

A foundation plan and details shall be submitted, including anchorage details. This includes final anchor bolt plans from pre-engineered metal buildings,

☐ **FLOOR PLANS**

A floor plan of the building with sufficient information to identify all areas and the Use Group shall be submitted. (Chapter 3, KBC)

☐ **Seismic Design Data & Letter of Special Inspection**  
**(Sections 1603.1.5 and 1704)**

☐ **CONSTRUCTION TYPE**

Sufficient construction details (i.e. exterior walls, interior bearing structure and floor/roof assembly) shall be submitted to confirm the building will comply with the minimum construction required. (Chapters 5 and 6 KBC)

☐ **FIRE WALLS**

If a fire wall is provided, the location of this wall shall be identified on the foundation and floor plans. A full height section through the wall shall be submitted.

**FIRE WALL-** A wall designed with a noncombustible material, specified fire rating and structurally independent to allow collapse of construction on either side without causing collapse of the wall itself. A fire wall shall be continuous from footer to or through roof. (Section 705, KBC)

☐ **SUPPRESSION SYSTEM**

Fire suppression design criteria shall be submitted when the project requires a sprinkler system involving more than 10 sprinklers. This applies to limited area systems as well as full coverage systems. (Section 903.2 and 302.1.1, KBC)

☐ **ADDITIONS**

If the proposed structure is an addition to an existing structure, information confirming the following shall be submitted for the existing building: (Section 3403 KBC)

- a) Construction Type;
- b) Fire wall location, construction and fire rating;
- c) Building Area
- d) Number Stories
- e) Use group Classification; and
- f) Type suppression system (Full coverage of limited area).

☐ **FEE**

The architectural plan review fee shall be paid in full before any release for construction can be issued. (Section 121 KBC)

☐ **FAST TRACK ELECTIVE**

For applicants seeking a quicker footing and foundation review only. The drawings and documents identified above submitted by close of business any Wednesday, for a S/F review the following Friday afternoon. Fee shall be calculated from Table 121.3.1 plus an additional 50% of the full fee. Additional fee shall not be less than \$400 and not more than \$3000.

# Exhibit G


## Environmental Report

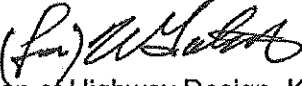
NOTE: THERE IS NO EXHIBIT G ATTACHED.


# Exhibit H

## Traffic Study

TO: Sam Ruth  
Commissioner, Finance and Administration Cabinet

THROUGH: Steve Waddle, PE   
State Highway Engineer, Kentucky Transportation Cabinet

THROUGH: Jeff Jasper, PE   
Director of Division of Highway Design, Kentucky Transportation Cabinet

FROM: Wendy Southworth, PE   
Division of Highway Design

SUBJECT: Capacity of KY 676 (East-West Connector) and Sower Boulevard Intersection  
with the addition of two possible State Office Buildings on the Carpenter Farm  
Tract

Per your request, an engineering analysis has been performed on the current KY 676 (East-West Connector) and Sower Boulevard intersection and its ability to handle an increase in traffic volumes due to the construction of two state office buildings. By determining the overall capacity of this intersection, it is possible to determine if this intersection will exceed its available capacity with the construction of two new state office buildings. And further if the intersection does exceed capacity with the construction of two new buildings, how many employees can utilize the new facility without causing capacity issues at this intersection.

This intersection is located between two major intersections. The KY 676 (East-West Connector) and KY 1659 intersection is approximately half a mile west of the KY 676 and Sower Boulevard intersection. KY 1659 is Martin Luther King Boulevard to the north, which is a major route to other state office buildings within Frankfort. The KY 676 (US 421) and US 60 Interchange is approximately one and a half miles east of the KY 676 and Sower Boulevard intersection. The KY 676 and Galbraith Road intersection is a minor intersection located between Sower Boulevard and US 60 on KY 676 and carries traffic into a residential area that connects to US 60. (See the attached Location Map)

In order to address the future capacity of the KY 676 and Sower Boulevard intersection the existing traffic has to be analyzed. The existing intersection geometry consists of two KY 676 east bound through lanes with a right turn lane onto Sower Boulevard and a left turn lane into Wilson's Nursery, and includes a total approach width of 48 ft (4 lanes at 12 feet each). There are also two KY 676 west bound through lanes (one through lane shares with right turn vehicles into Wilson's Nursery) and a left turn lane onto Sower Boulevard with a total west bound approach width of 36 ft (3 lanes at 12 feet each). The Wilson's Nursery access entrance includes one exit lane and one entrance lane with each lane measuring 15 feet and total entrance width of 30 feet. The Sower Boulevard approach consists of one left turn lane (onto KY 676 west bound), one through lane (into Wilson's Nursery) and one right turn lane (onto KY 676 east bound) with a total approach width of 36 feet (3 lane at 12 feet each).

Based on the current geometry of the KY 676 and Sower Boulevard intersection, an intersection capacity analysis was utilized to determine the maximum capacity of the intersection. Assuming that maximum capacity will occur at a Level of Service (LOS) D, the corresponding capacities of the Sower Boulevard approach and the KY 676 east bound approach are 1,900 vehicles per

hour (vph) and 2,400 vph respectively. Therefore, the overall maximum capacity of the intersection would be 4,300 vph. The current volume through this intersection is estimated to be 2,100 vph which is approximately half of the maximum capacity for the intersection. Further analysis using the Highway Capacity Software was utilized and a very similar conclusion was made.

With the construction of a large state office building and a small state office building, there is the potential for 1,650 employees to utilize the new facility. Although the number of vehicles traveling through the intersection would be greatly increased, based on the maximum capacity determined for the intersection, the intersection should continue to operate at an acceptable Level of Service. With the additional anticipated traffic due to the future development, the KY 676 and Sower Boulevard intersection should not exceed the maximum capacity for the intersection. However, it is important to note that an increase in delay is likely to occur on the US 60 Bypass, but it should not hinder the operation of the bypass as a whole. Also, with the addition of the two buildings, Sower Boulevard would have to be extended to the west to provide access to these buildings. The estimated cost for the Sower Boulevard extension is \$700,000.

However, if after construction of the two proposed office buildings, it is determined that the existing intersection is not performing as well as anticipated, the development of an additional approach connecting Sower Boulevard to KY 676 may need to be designed to relieve some of the traffic from the Sower Boulevard and KY 676 intersection. Several preliminary alternates have been reviewed for this study. A four-lane curb and gutter urban typical section with an eighteen foot median was utilized for these preliminary alternates. As shown in the attached maps, one of the alternates, East-West Connector Access, would connect Sower Boulevard to KY 676 at an existing undeveloped access point which already includes both a left and right turn lane onto the access road. Another alternate, Glenns Creek Road Access, would connect Sower Boulevard with KY 1659 (Glenns Creek Road) approximately 1,500 feet south of the KY 676 and KY 1659 intersection. This alternate would require a significant amount of excavation, therefore greatly increasing the estimated cost as compared to the East-West Connector Access. The final potential alternate included a cross country alignment going towards I-64. This alternate would include a new bridge across the Kentucky River and because of extensive construction cost, this alternate was not developed any further.

Below is a table showing the preliminary construction estimates for the above alternates. Please note that the estimated costs are construction cost only and do not include right of way or utility costs.

<b>Alternate Description</b>	<b>Estimated Cost (Construction Only)</b>
East-West Connector Access	\$2,000,000
Glenns Creek Connector	\$4,435,000
I-64 Connector	\$20,000,000 (Interchange not included)

In summary, the Kentucky Transportation Cabinet (KYTC) believes that the current intersection geometry is adequate to handle the additional volume of vehicles, if both, the large office building and the small office building are constructed in the Sower Boulevard Development. KYTC also believes that additional funds of approximately \$50,000 should be made available for upgraded signalization and striping for this intersection.

If there are any questions or concerns concerning the results as explained above, please feel free to contact KYTC-Division of Highway Design.

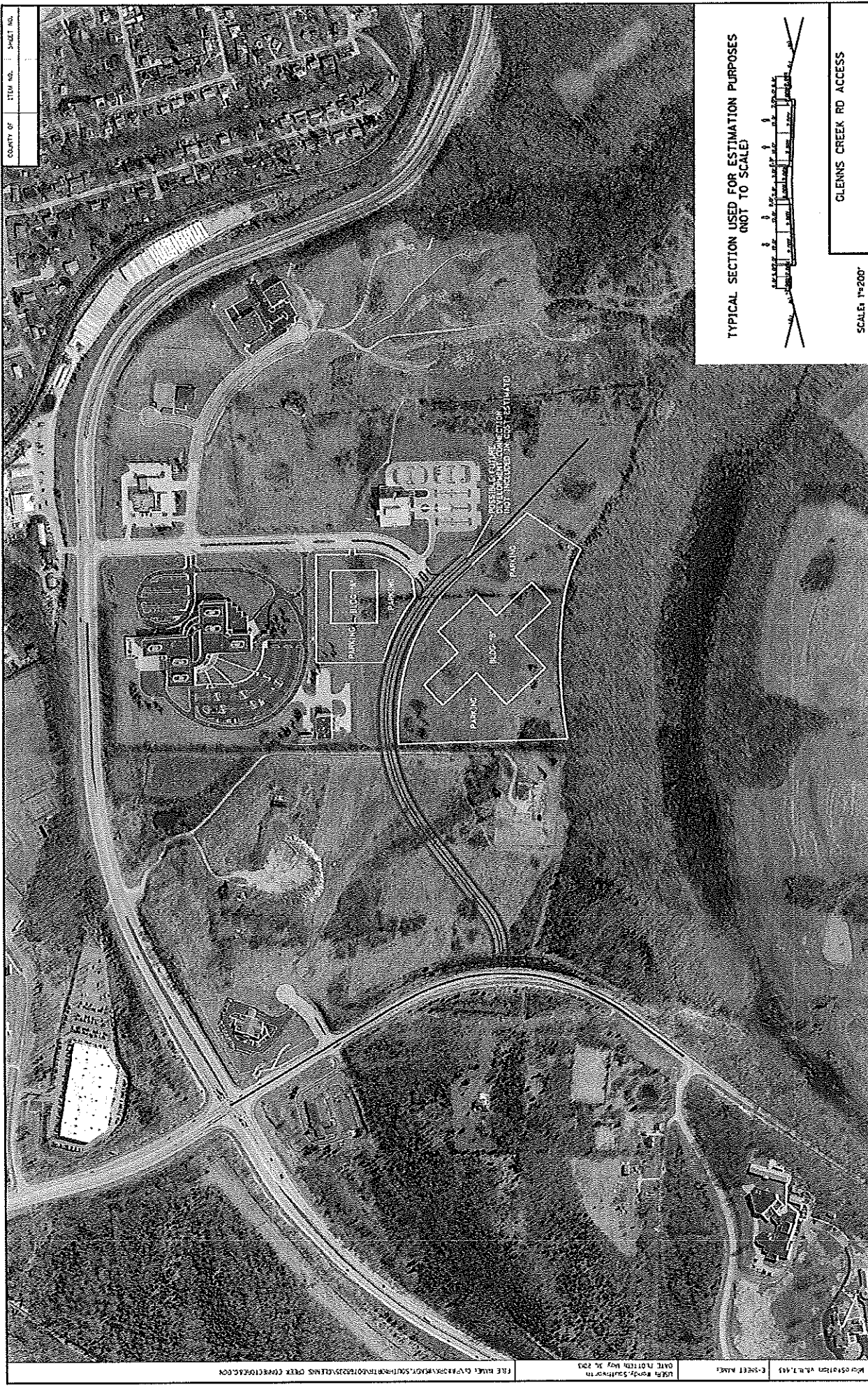


KY 676 (EAST-WEST CONNECTOR)  
AND SOWER BLVD INTERSECTION  
LOCATION MAP



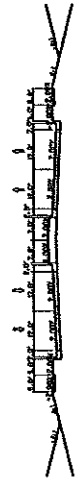






COUNTY OF	ITEM NO.	SHEET NO.

TYPICAL SECTION USED FOR ESTIMATION PURPOSES  
(NOT TO SCALE)



GLENN'S CREEK RD ACCESS

SCALE: 1"=200'

# Exhibit I

## General and Specific Project Requirements/Specs

**PROPOSED OFFICE BUILDING  
SOWER BLVD. "CARPENTER FARM" PROPERTY  
Minimum Building Standards  
FOR  
FINANCE AND ADMINISTRATION CABINET  
DEPARTMENT FOR FACILITIES MANAGEMENT AND  
SUPPORT SERVICES  
THE COMMONWEALTH OF KENTUCKY**

**Purpose**

The purpose of these design standards is to outline specific items of interest concerning building systems design and material selection for The Commonwealth of Kentucky lease-to-own office facility proposed in this RFP. These standards have been prepared with the intent to provide only specific quality and/or performance issues of primary concern to the Commonwealth of Kentucky for this building. The Commonwealth expects that the total building design will provide maximum utility and energy efficiency, requiring a minimum of maintenance and operational expense for the long term.

These standards set specific design direction for the proposed office building construction components and systems of specific interest to the Commonwealth, but does not address all building components and systems that will be offered or entertained as proposed.

Adherence to these specific standards is mandatory; however any equal or improved concepts, methods, or products are encouraged and will be given full consideration.

**Design Phases Documents**

The Lessor shall submit to the Division of Engineering and Contract Administration, Department for Facilities Management and Support Services, Finance and Administration Cabinet, Commonwealth of Kentucky, (DECA), three (3) sets (Half size scaled sets are acceptable) of complete design documents, for review and acceptance at interval points during the design process when the Lessor desires a review of the design in progress but no less than at 50% and 75% completion of design. Allow five working days for the review of acceptance of these documents prior to start of construction related to the documents submitted. Acceptance of these documents does not waive the Lessor's responsibility to comply with the provisions of the Lease and with all applicable building codes.

At the 75% completion of design, the Lessor's Architectural/Engineering team is to meet with DECA to review the design in detail at that point. This meeting shall be held at DECA Offices, 403 Wapping Street, Frankfort, Kentucky.

**Construction Documents**

The Lessor shall submit to the Division of Engineering and Contract Administration, Department for Facilities Management and Support Services, Finance and Administration Cabinet, Commonwealth of Kentucky, (DECA), three (3) sets of complete construction documents (full scale) bearing the seal and signature of a licensed architect and/or engineer in the Commonwealth of Kentucky, for review and acceptance prior to permit application and start of construction. Allow five working days for the review of acceptance of these documents prior to start of construction related to the documents submitted. Acceptance of these documents does not waive the Lessor's responsibility to comply with the provisions of the Lease and with all applicable building codes.

Construction documents are to include all architectural, civil, structural, mechanical, and electrical drawings and specifications as required for construction. Construction documents

shall include a complete civil engineering site plan indicating boundary with existing topographical grades and elevations, demolition, erosion plan, grading, lighting, utilities, building location, sidewalks, parking lot, drives, curbs, fences, signs, landscaping, and other site considerations. Comply with the requirements of the Frankfort/ Franklin County Planning and Zoning Commission for all site work documentation.

For Mechanical/ Electrical/ Plumbing, Fire Suppression, Fire Alarm, etc.: drawings and specifications are to have the items included from the charts at the end of this standard incorporated into the design.

Prepare a Commissioning Plan utilizing appropriate planning and communication tools, design and construction phase forms and checklist, functional performance testing, statistical inspections, and other appropriate methods to assure the Project functional success.

### **Periodic Review Meetings with the Commonwealth**

The Lessor, Architect/Engineers, and Major members of the Construction team shall meet with representatives of the Department for Facilities Management and Support Services, Division of Real Properties and Division of Engineering and Contract Administration prior to the commencement of construction for the purposes of reviewing the CPM schedule, to provide copies of all permits, reviews and other necessary documents for the start of construction, to discuss pertinent construction and site issues and to review the overall building plan. The Lessor shall issue minutes of meetings to all participants within five working days of the meeting.

The Lessor, Architect/Engineers, and Major members of the Construction team shall meet with representatives of the Department for Facilities Management and Support Services, Division of Real Properties and Division of Engineering and Contract Administration for periodic status/ progress/ construction review meetings on at least a monthly basis. The Lessor shall issue minutes of meetings to all participants within five working days of the meeting. These meetings will consist of review of the project schedule, review of major construction issues and processes. During these meetings, there will be on-site construction inspections to verify the provisions of the drawings and specifications are being met.

Representatives of the Department for Facilities Management and Support Services, Division of Real Properties and Division of Engineering and Contract Administration shall be granted unfettered access to the construction site during the construction period of this building for the purposes of reviewing the progress of the work, the quality of construction, the adherence to the accepted Construction Documents, and for their own planning purposes. These representatives will be provided access for review the current updated project schedule, all shop drawings and other project related documents, all inspection reports of the Architect/ Engineers, Project Superintendent Daily Reports, Inspection reports from the various Governmental Building Code Enforcement Official, etc.

The Department of Facilities Management and Support Services, Division of Real Properties and Division of Engineering and Contract Administration will conduct a "punch list" review of the construction as defined in the RFP and provide a written "punch list" of deficiencies that may not prohibit the Occupancy of the building but will be required to be completed within the prescribed time period after Occupancy.

### **Site Owned by the Commonwealth of Kentucky**

The proposed building is to be constructed on two site options: 1) existing land owned by the Commonwealth of Kentucky on the "Carpenter Farm" (Referred to in the RFP as the "Sower Boulevard Property) or 2) land owned that the Lessor that is within the legal boundaries of the City of Frankfort, Kentucky.

"Sower Blvd" Site: Currently owned by the Commonwealth of Kentucky consisting of what was originally part of a farm tract. The site is bounded by the State Centralized Laboratory Building with a Central Utility Plant (CUP) to the north, an undeveloped tract of land owned by the City of Frankfort and the Kentucky Public Service Commission Building to the east, the bluffs of the Kentucky River at Trumbo Bottom to the south and an undeveloped tract of land owned by a private corporation to the west. (Attached is a property and topographical survey and a Geotechnical Study of the existing property for use by the Proposed Lessor).

Access to the "Carpenter Farm" site is provided by an existing four lane road intersecting with the East-West Connector to the north. Sower Boulevard currently terminates at the entrance to the Kentucky Public Service Commission site and is to be continued by the Lessor into the proposed building site.

Utilities: The existing CUP's existing chiller capacity would not be large enough for additional loads and therefore any additional development would require its own chilled water plant. There is an existing 12-inch municipal water main which could be extended onto the property for domestic and fire protection service. Sanitary sewers which flow by gravity to municipal sewers are available for connection. Natural gas can, if required, be supplied by Columbia Gas of Kentucky Company's system. Electrical service provided by a municipal system is to be provided through underground distribution in keeping with other adjacent buildings. Internet service is available by a municipal system and is to be provided through underground distribution.

Traffic: A preliminary analysis by the Kentucky Transportation Cabinet has indicated that the existing traffic infrastructure is capable of servicing the addition of the 1300 person proposed building without any anticipated significant improvement. However, the proposed Lessor must obtain a final determination from the Kentucky Department of Transportation prior to commencement of construction. The development plan should provide planning for a second means of vehicular access and egress to the west even if the access is not required for this project.

Environmental: There is no evidence of any hazardous materials being encountered on site. In addition, at the request of the City of Frankfort, a Cultural Resource Assessment was conducted on the entire "Carpenter Farm", including the proposed building site. The findings of this report did not indicate evidence of either historic or prehistoric sites within the proposed site area.

Lessor Owned Site: Owned by the Lessor at the time of execution of the lease located within the legal boundaries of the City of Frankfort, Kentucky, consisting of sufficient acreage to allow for the construction of the proposed office building including site amenities (all contiguous land without division by public roadways. The Lessor shall provide at the time of RFP submission a boundary plot of the land offered. The Lessor shall provide at the time of submission of the 50% Design Phase review documents, a property and topographical survey, a Phase I Environmental Assessment Study and a Geotechnical Study.

Access to the Lessor owned property shall be provided from a major public transportation corridor. The access from the major public transportation corridor to the site is to be provided by the Lessor and continued by the Lessor into the proposed building site.

Utilities: The Lessor is responsible for the obtaining connection to a municipal water main which could be extended onto the property for domestic and fire protection service. Sanitary sewers which flow by gravity or are pumped by a force main to municipal sewers shall be provided by the Lessor. Natural gas is to be obtained, if required, from Columbia Gas of Kentucky Company's system. Electrical service provided by a municipal system is to be provided through underground distribution once on the site. Internet service is to be available by a municipal system and is to be provided through underground distribution system on the site. The Cost of

obtaining, providing infrastructure and connecting to the utilities indicated above shall be borne by the Lessor.

**Traffic:** The Lessor shall provide documentation of a traffic study conducted to insure that any existing traffic infrastructure is capable of servicing the addition of the 1300 person proposed building. Also provide documentation that the Kentucky Department of Transportation and the Frankfort/ Franklin County Planning and Zoning Commission approve of the proposed traffic increase. If improvement, of any kind, is necessary to the existing traffic infrastructure to provide the additional traffic flow, this cost is to be borne by the Lessor.

**Environmental:** The Lessor is responsible for all Environmental Assessment Studies necessary for the proposed use of the property, including identification of historic or prehistoric sites, ecological and biological habitats, etc. within the proposed site area. If any mitigation, modification, or "Fee in lieu of" costs are required for the proposed use of this site, the cost thereof shall be borne by the Lessor.

### **Site Planning and Design**

The Lessor shall comply with the Local Frankfort/ Franklin County Planning and Zoning Requirements for site design.

**Gradients:** At turf areas provide positive drainage – between 3:1 and 1 percent (2 percent desirable), steeper than 3:1 requires ground cover or other erosion control, steeper than 2:1 is not acceptable. Terracing is acceptable if access for lawn equipment is provided. Parking lot drives shall not be crowned but shall have positive drainage. Provide areas for piling of snow in multiple locations adjacent to the parking lot.

Service drives are to be accessed from site circulation drives, properly signed as service only, screened as much as possible, separate from parking access and may be of one way design.

Provide visitor parking and signage equal to the number of spaces designated for handicapped parking. Indicate a two-hour time limit for parking in these spaces. Visitor parking area(s) shall be visible and convenient to the public entrances to the building.

**Remote Shelter Pavilions in parking lot:** From a main building entrance on each of four sides of the building, the Commonwealth reserves the right to require up to four (4) remote shelter pavilions in the parking lot depending on the parking lot configuration and the use of terracing. These remote shelter pavilions must be structurally sound to withstand all structural loading that is anticipated including wind uplift for I-90 winds, have three enclosed sides, have concrete floors, be ADA accessible, and have bench seating. The remote shelter pavilions shall be constructed of durable materials and aesthetically similar to the building façade design.

Landscaping shall be native plants that do not require irrigation and only routine maintenance. Landscaping shall comply with the requirements of the Frankfort/Franklin County Zoning Ordinances.

Any mechanical equipment located on the exterior of the building shall be properly screened (either with screening similar in construction to the building facades or landscaping) and isolated from the main entrances into the building.

Dumpsters, dumpster pad and screening shall be as required by the Frankfort/ Franklin County Zoning Ordinances.

### **Office Building Planning and Design**



Space Planning Security Design: Controlled access is required to the entire building from the exterior (at all building entrances) and to each individual floor. The card access management system is to match existing Commonwealth of Kentucky access system operated by the Office of Building and Mechanical Services (Hirsch Version 3.5). The access system is to be capable of tracking the issuing and revocation of access cards along with generating reports of all access into the building. Provide card readers at all building entrances, loading docks, and stairwell doors and elevators. The Commonwealth of Kentucky will provide the access badges and activation of these badges. A central data base computer is to connect all access locations, be equipped for stand-alone operation upon power failure and programmed for automatic locking/unlocking of building doors. The failsafe for exterior and interior doors with security is locked from the outside but provide free egress from the inside.

Space Planning Offices: Space planning will be performed by the Division of Real Properties space planner using the basic building plan provided by the Lessor in AutoCAD format. Since this space planning will not occur until after award of the lease, allowances will be used as indicated below and adjusted by change order to the lease once the space planning is completed. For the purposes of the lease proposal in response to this RFP, assume the following allowances:

Five Cabinet Secretary Office suites with:

1 Cabinet Secretary office (250 sf, with door to the administrative assistant area and into the conference room). Walls to extend to deck and be insulated with sound batt insulation, doors shall be lockable)

2 Deputy Secretary offices (175 sf. with door to the administrative assistant area). Walls to extend to deck and be insulated with sound batt insulation, doors shall be lockable)

2 Staff Offices (125 sf. with door to the administrative assistant area). Walls to extend to deck and be insulated with sound batt insulation, doors shall be lockable)

1 Copy room with room for a copier, and kitchenette with microwave (NIC), two compartment sink, under-counter refrigerator (NIC), base and overhead cabinets and room on counter for coffee maker (NIC). Walls to extend to deck and be insulated with sound batt insulation.

1 Administrative Assistant area (with desk and files), include a small waiting area for six persons.

Conference Room for 20 persons (with door to Cabinet Secretary Office and to administrative assistant area).

20 Private Offices scattered throughout the floors/plan (175 sf.) Walls to extend to deck and be insulated with sound batt insulation, doors shall be lockable)

50 Private Offices scattered throughout the floors/plan (125 sf.) Walls to extend to deck and be insulated with sound batt insulation, doors shall be lockable)

10 conference rooms (for 20 people) scattered throughout the floors/plan. Walls to extend to deck and be insulated with sound batt insulation, doors shall be lockable)

20 conference rooms (for 12 people) scattered throughout the floors/plan. Walls to extend to deck and be insulated with sound batt insulation, doors shall be lockable)

10 file storage rooms (500 sf. min) scattered throughout the floors/plan. Walls to extend to deck and be insulated with sound batt insulation, doors shall be lockable)

The remainder of the usable floor space will be fit out with cubicles with systems furniture (desk, under desk files, over compartment and 6' high walls) (NIC). Calculate total number of cubicles by the following size/percentages:

8x10	25% of Total
8x8	55% of Total
8x6	20% of Total

Provide in lease proposal an allowance of \$1.00 per gross square footage of total building proposed to be used for providing specific room signage (not including directories and wayfinding signage indicated as required elsewhere). This allowance will be used by the Commonwealth to select and schedule office and cubical signage that will be purchased and installed by the Offeror using this allowance as the maximum dollar limit for signage.

Provide for each cubical space two data outlets and two duplex power outlets; provide for each private office two data outlets and two duplex power outlets at the desk location and two duplex power outlets on every other wall; provide for each conference room two data outlets and two duplex power outlets in the floor under the conference room table and three duplex power outlets on every wall; provide two duplex power outlets in break rooms; provide adequate power outlets in all other spaces for the equipment indicated to be installed. (These will be located specifically in the space plan provide by the Division of Real Properties space planner).

Space Planning Entrances, Vestibules and Lobbies: Divide major lobbies into secure/non-secure areas with provisions for card controlled access, for employee entrance and security controlled access for visitors. Provide security casework (for two guards and files) at main lobby. Built in casework shall be used as a security desk. Provide adequate power, phone, data and security equipment provisions. Provide directional wayfinding graphics and directories in the main lobby and in lobbies of each floor (near elevator banks). Provide wayfinding signage at stairways. Provide restroom and mechanical signage (ADA Compliant)

Space Planning Loading Docks/Loading Areas: Locate loading docks and loading areas separate from main entrance and locate convenient to freight elevator and major mechanical area. Provide hydraulic dock leveler, dock bumpers, dock lock, dock seals and edge guards. Loading dock doors are to be insulated overhead coiling type, with push button controls. Provide an adjacent man door to the dock door. Provide a separate area for trash compactor and recycling area. Locate trash rooms adjacent to dock area and provide space for paper, glass and metal recyclable containers.

Space Planning Support Spaces: Where possible do not locate mechanical equipment on roof. If necessary (with no other option) locate and centralize all mechanical equipment in a penthouse. Avoid scattering miscellaneous condensing units, exhaust fans and equipment on the roof. Locate equipment behind a screen wall and integrate into the building design. Provide roof walkway pads compatible to the roofing system to roof top equipment.

Allow for a snack/ vending area to be operated by the Department for the Blind (4700 sf) on the first floor of the building (or main building in the case of multiple buildings on the site). Offeror to provide a stainless steel three-compartment sink with disposer, a handwashing sink, 2188 cfm exhaust hood similar to Accurex Model no. XXEW-210-S-X with Ansul model R102 wet chemical fire suppression system. The Department for the Blind will provide all equipment and furnishings. Actual fitup configuration to be determined after award during space planning period. Lessor will



provide mechanical/ electrical service hookups at locations required by fitup configuration design. Provide electrical power and water/ sewer connections as indicated by the space plan. (Assume 20 Duplex outlets, two data outlets) (Assume three domestic water connections and condensate drains) (Assume a three compartment sink with hot and cold water supply and sanitary drain).

This square footage required for the snack/vending area is in addition to the 334,000 total square footage requirement of the building.

#### FINISH SCHEDULE:

<b>Architectural Door, Room and Finish Standards</b>	<b>Lobby/ Commons</b>	<b>Confer- ence Room/ Office</b>	<b>Open Office Area</b>	<b>Toilet Room/ Janitor</b>	<b>Vending Room</b>	<b>Ext. Walls (Gen- eral)</b>	<b>Mech.- Elec. Rooms/ Machine Rm</b>	<b>File/ Storage Rooms</b>	
<b>Wall Type</b>	W1	W3	W5	W2	W4	W6	W7	W7	
<b>Door Type</b>	D1	D2	D2	D4	D5	D1 /D3	D2	D2	
<b>Door Hardware</b>	H1/H2	H4	H3	H6/H4	*w/ Door	H1	H5	H4	
<b>Floor Type</b>	F1	F2	F2	F4	F3	-	F5	F3	
<b>Ceiling Type</b>	C1/C2	C2	C2	C1	C2	-	C2/C3	C1	
<b>Types Legend</b>									
<b>Designation</b>	<b>Construction Description</b>								
W-1	3-5/8" metal studs at 16"oc center with 5/8" gypsum board each face with acoustical insulation. Extend from finish floor to underside of floor or roof deck. Provide deflection track and seal tight to deck above.								
W-2	3-5/8" metal studs at 16" oc with acoustical insulation, 5/8" gypsum board on one face with 5/8" moisture resistant gypsum board and ceramic tile to 48" aff opposite face. Extend wall to roof or floor deck above. Provide deflection track above.								
W-3	3-5/8" metal studs at 16" oc with 5/8" gypsum board on one face with 5/8" gypsum board each face with acoustical insulation. Extend to roof or floor deck above. Provide deflection track above.								
W-4	3-5/8" metal studs at 16" oc with 5/8 " gypsum board each face with acoustical insulation. Clip to ceiling grid and provide 24" acoustical insulation at both sides of partition.								
W-5	3-5/8 inch metal studs at 16 inches on center with 5/8 Inch gypsum board each face. Clip to underside of ceiling.								
W-6	3-5/8" metal studs with 5/8" gypsum board with cavity insulation. Extend 12" above ceiling. Extend insulation to underside of floor or roof deck								
W-7	Wall as required to achieve required fire rating. Provide acoustical control to adjoining spaces. Provide finish as appropriate.								
D-1	Aluminum storefront medium stile with side light								
D-2	Hollow metal frame and solid wood door/ side light.								
D-3	Hollow metal frame and hollow metal door/ side light or narrow light glazing								
D-4	Hollow metal frame and wood door								
D-5	Overhead colling storefront security grille in frame.								
H-1	Panic bars, closer, lock, hinges, weatherstrip								
H-2	Aluminum push/pulls, closer, hinges, floor bumpers								
H-3	Mortise passage set, hinges, wall bumper								
H-4	Mortise lock set, hinges, wall bumper								
H-5	Mortise lock set, hinges, closer, wall bumper								
H-6	Push /pulls, closer, hinges, wall bumper								

F-1	Terrazzo or Synthetic Terrazzo with Stone Base.
F-2	Carpet with rubber base
F-3	Vinyl composition tile with base
F-4	Ceramic floor tile with sanitary coved base
F-5	No floor finish, provide anti-dusting sealer only
C-1	Metal suspension system with acoustical lay-in ceiling
C-2	2 1/2" gypsum board on metal suspension system, painted
C-3	Open, no ceiling, no paint

### Structural Design

Verify with Lessee special floor loading requirements for computer room loads, special equipment loads and storage loads. In response to RFP assume that design will require 4 structural bays on two different floors (not stacked) for high density storage systems. Assume in the response to the RFP that these 4 structural bays will be enclosed in a one-hour rated enclosure with two remotely located doors for egress. These doors shall be fire rated and operate with a card reader for access.

Diagonal structural bracing is not to be located at exterior perimeter walls in conflict with window openings or doorways.

### Building Roof System

Roofs shall be sloped to prohibit snow and ice slide off onto entry doors. Use cold roof design in heavy snow areas to prevent snow and ice build-up. If sun-shading devices used, provide method to avoid ice and snow build-up on these devices. Flat or level roofs are not permitted.

Provide either a membrane roof system or a metal roofing system (or a combination of the two) as outlined below. At the end of the lease period, with the transfer of ownership to the Commonwealth of Kentucky roof systems shall have a minimum of five years of specified warranty remaining.

**Membrane Roof Systems:** Provide a 2 ply modified bitumen system. The selected roof system must have a 20 year full system no-dollar-limit warranty which is to include insulation, fasteners, flashings, and roof systems accessories. Roof system manufacturer is to provide a roof inspection and roof report, with copies, to both the Lessor and DECA, as the representative of the Lessee, at project completion. Roof warranty shall commence at the date of Substantial Completion of the entire project. A non-white reflective membrane system is preferred. Roof insulation is to comply with the Kentucky Building Code and be installed in 2 layers, joints staggered.

**Metal roof panels:** Manufactured roof panels comprised of polyisocyanurate insulations sandwiched between 24 gage aluminum coated sheet steel with a Kynar 500 finish. Provide continuous snow fencing to prohibit snow slide-off on all sloped metal roof applications. Manufacturer is to provide a 20 year full systems no-dollar-limit warranty. Warranty shall commence at the date of Substantial Completion for the entire project.

Roof Mounted HVAC equipment are not permitted anywhere on the roof of the building.

### Interior Components and Finishes

Installation standards: Gypsum board shall be installed and finished per United States Gypsum Co. levels of gypsum board finishing as follows:

- Level 1 finish: When above finished ceilings and concealed from view.
- Level 2 finish: As a substrate for tile.
- Level 3 finish: When to receive a heavy or medium textured finish.
- Level 4 finish: In offices, corridors, and all areas not indicated above

**Door hardware:** For buildings owned or operated by the Commonwealth of Kentucky; furnish and install door hardware to comply the following: 1) Quality level: Heavy duty commercial. 2) Keying: Owner's (agency) requirements for keying and key control systems with master and grand master keying. Use Best 5-pin Cores. 3) Card operated opening devices are required where indicated elsewhere in this guideline. System to be compatible with Lessee's existing card operated system.

**Toilet and Bath Accessories:** Provide all necessary toilet accessories (except Paper Towel dispensers, Feminine napkin dispensers, soap dispensers and seat cover dispensers are NOT TO BE PROVIDED, these will be provided by an independent vendor working under separate agreement with the Commonwealth of Kentucky). (Provide blocking in wall and mark wall for location to be installed).

**Window Treatment:** Provide commercial grade blinds at all exterior windows. Provide chain for blade rotation and polyester chord for side draw.

### **Elevators**

For typical multi-stop application provide a hydraulic passenger elevator system, 3,500 pound capacity minimum with a finish clear cab size of not less than 6 feet 8 inches by 4 feet 3 inches with a minimum ceiling height of 7 feet 11 inches. Cab speed shall not be less than 80 feet per minute. Elevator cabs are to have plastic laminate side walls, protective bumpers and skid-resistant vinyl composition tile floor surface. Furnish removable protective pads. A minimum of four (4) passenger elevators is required for the building.

A freight elevator (which can be one of the passenger elevators with removable protective pads) is required. As a minimum freight elevators shall be Class A, hydraulically operated, with a minimum of 3,500 pound load capacity. Minimum clear cab size shall be 5 feet 4 inches by 7 feet. Ceiling height a minimum of 10 feet.

### **Mechanical Systems**

Provide a building automation system to monitor and control lighting, ventilation, heating and air conditioning systems. Lessor shall provide the latest technology and technology integration for building automation systems. Fire alarm and security system must function as stand-alone systems with an interface to the building automation system.

Air filters are to be changed at the time of occupancy.

Computer Rooms – Special HVAC equipment required for Computer Rooms shall provide a maximum temperature in the room of 73-degrees F. (Temperature  $73^{\circ}\text{F} \pm 4^{\circ}\text{F}$ , Humidity 30-50%.) Ventilation Office Space: 20 cfm per person or 0.2 cfm / sq. ft. (whichever is greater. Break Room: 30 cfm per person, Waiting Area: 15 cfm per person, Vending area, toilet/Janitor's Closet: 10 air changes per hour and 100% exhaust.

Include those items listed in the Mechanical Systems charts at the end of this standard into the construction.

Design building envelope and building systems to maximize energy efficiency. Comply with the requirements of ASHRAE 90 (2010) standards.

### **Electrical Standards**

Planning shall include locations of copier, microwaves, coffee machines, and vending machines. Provide as a minimum a separate 20-amp circuit for each device. Provide as a minimum 20-amp dedicated circuits with isolated grounds to all copy machines.

Provide as a minimum isolated ground 20-amp circuits with surge protected receptacles for all main computer hub network equipment and audio-visual equipment. Dedicated isolated-grounded circuits are not required for computer receptacles.

Provide a minimum of a twenty-five (25%) percent spare capacity above maximum demand for future growth of the electrical system.

Planning shall take into consideration the Lessee's Phone and Data systems and security system components including card access systems and any other components included in the security system.

Include those items listed in the Electrical Systems charts at the end of this standard into the construction.

## Laboratory Building Planning and Design

*NOTE: A "Laboratory Building" or a portion of the main building dedicated to the "Laboratory" functions shall be provided when the project is being constructed on Lessor Owned Land. This "Laboratory" function is not required when the project is being constructed on State Owned Land since the Central Laboratory Building adjacent to this site is available to house the "Laboratory" functions.*

**Space Planning Security Design:** Controlled access is required to the entire building from the exterior (at all building entrances). The card access management system is to match existing Commonwealth of Kentucky access system operated by the Office of Building and Mechanical Services (Hirsch Version 3.5). The access system is to be capable of tracking the issuing and revocation of access cards along with generating reports of all access into the building. Provide card readers at all building entrances. The Commonwealth of Kentucky will provide the access badges and activation of these badges. The central data base computer in the main office building will also manage/ operate this buildings system.

**Space Planning Offices:** Space planning will be performed by the Division of Real Properties space planner using the basic building plan provided by the Lessor in AutoCAD format. Since this space planning will not occur until after award of the lease, allowances will be used as indicated below and adjusted by change order to the lease once the space planning is completed. For the purposes of the lease proposal in response to this RFP, assume the following allowances:

### Management Offices:

2 Private Offices (175 sf. each) Walls to extend to deck and be insulated with sound batt insulation, doors shall be lockable)

2 Private Offices scattered throughout the floor plan (125 sf. each) Walls to extend to deck and be insulated with sound batt insulation, doors shall be lockable)

1 conference room (for 18 people). Located in the central portion of the building to serve both laboratories. Walls to extend to deck and be insulated with sound batt insulation, doors shall be lockable)

2 file storage rooms (400 sf. Min each). Walls to extend to deck and be insulated with sound batt insulation, doors shall be lockable)

The remainder of the usable floor space will be fit out with cubicles with systems furniture (desk, under desk files, over compartment and 6' high walls) (NIC). Calculate total number of cubicles by the following size/ percentages:

8x10

20% of Total

8x8

80% of Total

**Specialized Laboratory Space (Air Quality Lab):**

One laboratory space of a minimum of 200 square feet with resilient floor tile flooring with static control system embedded in it; A room within the laboratory for cassette processing of a minimum of 75 square feet with Air-Lock entrance (minimum 35 sf) that has a dedicated HVAC system with humidity control; and lockable door.

Provide in lease proposal an allowance of \$1.00 per gross square footage of total building proposed to be used for providing specific room signage (not including wayfinding signage indicated as required elsewhere). This allowance will be used by the Commonwealth to select and schedule office and cubical signage that will be purchased and installed by the Offeror using this allowance as the maximum dollar limit for signage.

Provide for each cubical space six duplex power outlets; provide for each private office two data outlets and two duplex power outlets at the desk location and two duplex power outlets on every other wall; provide for each conference room two data outlets and two duplex power outlets in the floor under the conference room table and three duplex power outlets on every wall; provide adequate power outlets in all other spaces for the equipment indicated to be installed. (These will be located specifically in the space plan provide by the Division of Real Properties space planner).

**Space Planning Support Spaces:** Do not locate mechanical equipment on roof. Avoid scattering exhaust fans and equipment on the roof. Locate equipment behind a screen wall and integrate into the building design.

**Structural Design (If a separate building is provided)**

Building is expected to be a pre-engineered metal building. Exterior façade to not be predominately metal panels. Diagonal structural bracing is not to be located at exterior perimeter walls in conflict with window openings or doorways.

**Building Roof System (If a separate building is provided)**

Roofs shall be sloped to prohibit snow and ice slide off onto entry doors. Use cold roof design in heavy snow areas to prevent snow and ice build-up. If sun-shading devices uses, provide method to avoid ice and snow build-up on these devices. Flat or level roofs are not permitted.

Provide a metal roofing system. At the end of the lease period, with the transfer of ownership to the Commonwealth of Kentucky roof systems shall have a minimum of five years of specified warranty remaining.

**Metal roof panels:** Manufactured roof panels comprised of polyisocyanurate insulations sandwiched between 24 gage aluminum coated sheet steel with a Kynar 500 finish. Provide continuous snow fencing to prohibit snow slide-off on all sloped metal roof applications. Manufacturer is to provide a 20 year full systems no-dollar-limit warranty. Warranty shall commence at the date of Substantial Completion for the entire project.

**Interior Components and Finishes**

**Installation standards:** Gypsum board shall be installed and finished per United States Gypsum Co. levels of gypsum board finishing as follows:

Level 1 finish: When above finished ceilings and concealed from view.

Level 2 finish: As a substrate for tile.

Level 4 finish: In offices and other areas.

**Door hardware:** For buildings owned or operated by the Commonwealth of Kentucky; furnish and install door hardware to comply the following: 1) Quality level: Heavy duty

commercial. 2) Keying: Owner's (agency) requirements for keying and key control systems with master and grand master keying. Use Best 5-pin Cores. 3) Card operated opening devices are required where indicated elsewhere in this guideline. System to be compatible with Lessee's existing card operated system.

**Toilet and Bath Accessories:** Provide all necessary toilet accessories (except Paper Towel dispensers, Feminine napkin dispensers, soap dispensers and seat cover dispensers are NOT TO BE PROVIDED, these will be provided by an independent vendor working under separate agreement with the Commonwealth of Kentucky. (Provide blocking in wall and mark wall for location to be installed).

**Window Treatment:** Provide commercial grade blinds at all exterior windows. Provide chain for blade rotation and polyester chord for side draw.

### **FINISH SCHEDULE:**

<b>Architectural Door, Room and Finish Standards</b>	<b>Commons</b>	<b>Confer- ence Room/ Office</b>	<b>Open laboratory Area</b>	<b>Toilet Room/ Janitor</b>	<b>Vend- ing Room</b>	<b>Ext. Walls (Gen- eral)</b>	<b>Mech.- Elec. Rooms/ Machine Rm</b>	<b>File/ Storage Rooms</b>
<b>Wall Type</b>	W1	W3	W5	W2	W4	W6	W7	W7
<b>Door Type</b>	D1	D2	D2	D4	D5	D1 /D3	D2	D2
<b>Door Hardware</b>	H1/H2	H4	H3	H6/H4	--	H1	H5	H4
<b>Floor Type</b>	F4	F2	F4	F4	F3	-	F5	F3
<b>Ceiling Type</b>	C1/C2	C2	C2	C1	C2	-	C2/C3	C1
<b>*** Types Legend (See legend provide for main office building.</b>								

### **Mechanical Systems**

Provide a building automation system to monitor and control lighting, ventilation, heating and air conditioning systems. Lessor shall provide the latest technology and technology integration for building automation systems. Fire alarm and security system must function as stand-alone systems with an interface to the building automation system.

Air filters are to be changed at the time of occupancy.

Computer Rooms – Special HVAC equipment required for Computer Rooms shall provide a maximum temperature in the room of 73-degrees F. (Temperature 73°F ± 4°F, Humidity 30-50%.) Ventilation Office Space: 20 cfm per person or 0.2 cfm / sq. ft. (whichever is greater. Break Room: 30 cfm per person, Commons area: 15 cfm per person, Vending area, toilet/Janitor's Closet: 10 air changes per hour and 100% exhaust. Special requirements for fitup of three existing fume hoods.

Include those items listed in the Mechanical Systems charts at the end of this standard into the construction.

Design building envelope and building systems to maximize energy efficiency. Comply with the requirements of ASHRAE 90 (2010) standards.

### **Electrical Standards**

Planning shall include locations of copier, microwaves, coffee machines, and vending machines. Provide as a minimum a separate 20-amp circuit for each device. Provide as a minimum 20-amp dedicated circuits with isolated grounds to all copy machines.

Provide as a minimum isolated ground 20-amp circuits with surge protected receptacles for all main computer hub network equipment and audio-visual equipment. Dedicated isolated-grounded circuits are not required for computer receptacles.

Provide a minimum of a twenty-five (25%) percent spare capacity above maximum demand for future growth of the electrical system.

Planning shall take into consideration the Lessee's Phone and Data systems and security system components including card access systems and any other components included in the security system.

Include those items listed in the Electrical Systems charts at the end of this standard into the construction.

### **Project Closeout**

The Lessor shall notify the Division of Engineering and Contract Administration (DECA), representing the Lessee, when the work will be Substantially Complete. The Lessor and DECA, representing the Lessee, shall conduct one final construction punch list. This construction punch list is to be published by the Lessor. All concerned parties shall attend a final construction punch list meeting. The Architect/ Engineer will prepare the official punch list documents and distribute to all affected and/or concerned parties. All punch list work shall be completed within 30 days from the date of the punch list publication date.

At the time of Substantial Completion the Lessor/contractor shall provide (or maintain on site where indicated) the following:

Permit certification including all applicable permits. This may include but it is not limited to *Certificate of Occupancy*, general building permit, mechanical permit, HVAC permit, electrical permit, site work permit, *fire alarm and sprinkler system certifications* or any other miscellaneous permits. *Provide copies to DECA and maintain the originals at the building.*

*Keys – maintain any and all keys required to operate the facility at the building in an organized manner. At the end of the term of the lease (with transfer of ownership to the Commonwealth of Kentucky) submit these keys to DECA, representing the Lessee. (An agency sign off is required for transmitted keys.) All remaining specified keys required by the project specifications must be maintained at the project site prior to final project close out and turned over to DECA at the end of the term of the lease (with transfer of ownership to the Commonwealth of Kentucky). (Including but not limited to: fire extinguisher cabinets, fire alarm panels, access doors, cabinets or case work, electrical panels, HVAC control panels or security systems.)*

*At the time of Substantial Completion conduct training of the management team that will maintain the building during the term of the lease. Video tape all training sessions, provide the Commonwealth of Kentucky with a DVD or removable hard drive containing the videos of all training sessions. At the end of the term of the lease (with transfer of ownership to the Commonwealth of Kentucky), provide agency training to be completed to the extent required to properly operate the facility upon turn over to the Commonwealth of Kentucky. An agency sign-off is required.*

*O & M Manuals – a minimum of at least 3 copies of all O & M manuals must be submitted at the end of the term of the lease (with transfer of ownership to the Commonwealth of Kentucky). Until that time, at least one copy of the O & M manuals must be maintained in an orderly fashion at the building.*

*Special Tools and Equipment – any special tools, spare parts, accessories, or equipment required to operate the facility must be maintained at the building site. At the end of the term of the Lease (with transfer of ownership to the Commonwealth of Kentucky), turn over to DECA, representing the Lessee. An agency sign-off is required.*

At Project Close-Out provide the following:

*Where warranties are provided or specified (including be not limited to the roof warranties including flashing and sheet metal work, windows, including glass seal and manufacture warranties, doors, equipment warranties which extend beyond the normal contract guarantees and including any service agreements for elevators, air conditioning units, specialized equipment, computer systems, or other special equipment). Provide copies to DECA and maintain the originals at the building.*

Submit AS-BUILTS on Mylar with stamps and signatures of design professionals to the Commonwealth of Kentucky at Final Completion.

#### Mechanical

Provide posted operation instructions for manually operated mechanical systems. They are to consist of simplified instructions and diagrams for equipment, controls and operations of the systems , including boilers, refrigeration equipment, HVAC controls, hot and chilled water distribution and hot and cold water domestic water. Instructions are to be framed and posted adjacent to the major piece of equipment of the system.

\*\*\* See attached charts for other Mechanical and Electrical Requirements.

END OF STANDARDS



**Owner's Project Requirements – Applies to All Mechanical/Electrical/Plumbing**

<b>Reference</b>	<b>All MEP Specifications Requirements</b>
	Provide for the Owner Training requirements identified under the functional performance requirements.
	<b>All MEP Design Requirements</b>
	Access requirements shall be graphically presented for all maintainable equipment.
	Provide access doors to all concealed valves and controls and/or items that require access or maintenance.
	Drawings and schedules shall incorporate provisions for the collection of Record Drawing Information
	Maintain a minimum four (4) inch clearance below all roof decking to mechanical and electrical system components.
	Provide Utility markers for all new utilities and existing utilities.
	<b>All MEP Functional Requirements</b>
	Incorporate the Systems Basis of Design document into the project Systems Manual.
	Prepare a Commissioning Plan utilizing appropriate planning and communication tools, design and construction phase forms and checklist, functional performance testing, statistical inspections, and other appropriate methods to assure the Project functional success.
	All Equipment, piping, ductwork and conduit shall be protected from damage or the introduction of dirt or debris into the system.
	Systems shall be installed in compliance with all current applicable codes and authorities having jurisdiction.
	Provide redundant mechanical system provisions for critical elements (pumps, boilers, chillers, etc.).
	Utility distribution (including building service piping systems) shall be zoned to accommodate reasonable service and emergency isolation provisions.
	Mechanical, electrical and instrumentation tagging and labeling shall be consistent with record drawings.
	Room numbers on record documents and automation graphics shall match actual room numbers applied by Owner.
	Record Drawings shall be complete prior to Owner acceptance of the building.
	Record Drawings shall reflect manufacturer, model number, serial number and DDC

	address of all maintainable equipment on the project.
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### Fire Suppression - Owner's Project Requirements

Reference	Design Requirements
	Sprinkler freezing and condensation considerations shall be addressed, particularly at intake and relief damper locations and in conjunction with dry storage and walk-in freezers and coolers.
	Below grade utility lines shall be clearly and accurately marked with appropriate marker tape.
	Building Sprinkler Systems shall be designed using hydraulic calculation procedures
	Utilization of chemical based fire suppression systems are not permitted without written authorization..
	Include fire protection system flow information on project drawings.
	Sprinkler system zones should correspond with fire alarm zones and be identified on drawings with appropriate control valves, alarm switches, etc.
	<b>Functional Requirements</b>
	Sprinkler systems shall be designed and zoned to facilitate easy testing and maintenance.

### Plumbing - Owner's Project Requirements

Reference	Specification Requirements
	Water treatment program specifications shall be included for all water systems
	All piping systems shall be labeled/identified to the signage requirements of ANSI/ASME A13.1
	<b>Systems Basis of Design Requirements</b>
	Define peak flow conditions used for design
	Define special equipment service requirements
	Define operating temperatures used for design
	<b>Design Requirements</b>
	Provide space/access for equipment replacement. For example, do not place water heaters or water storage tanks behind other equipment, where removal and replacement

	would be impaired.
	Provide dielectric couplings where dissimilar metals are joined or in contact with metal wall penetrations. Dielectric unions are not acceptable.
	Utilize floor sinks in custodial closets
	Custodial closets shall be separated from mechanical rooms
	Loading docks shall have a custodial closet in close proximity.
	Major custodial areas shall include provisions for clothes washing machines and dryers.
	Clothes dryers shall vent to the exterior of the building.
	Plumbing lines shall not be routed on the roof.
	Provide detail showing gas-fired equipment hard piped to point of gas connection.
	Backflow preventers at water entry and as required elsewhere shall be located in readily accessible mechanical spaces. Include upstream strainers and adequate drainage provisions.
	Flexible water hoses supplying appliances or HVAC equipment shall be protected and reinforced with metal braiding of a material appropriate for the application.
	Plumbing fixture and accessories shall be submitted to the User Agency and their operating staff for approval as scheduled in the Design Deliverables Checklist.
	Provide a hose bib at all toilet rooms with multiple fixtures and all shower rooms.
	Below grade utility lines shall be clearly and accurately marked with appropriate marker tape.
	Modular plumbing equipment systems shall be piped in a manner to facilitate removal of one module without disabling operation of the system.
	Sanitary cleanouts shall be furnished with Bronze finish.
	<b>Functional Requirements</b>
	All piping systems shall include provisions for proper draining and venting.
	Laboratories and similar applications shall have chemical resistant plumbing components suitable for the current applications.
	Provide domestic water service hydrants for grounds maintenance.
	Domestic hot water to custodial closet fixtures shall be 140° F
	Major mechanical equipment shall be located in a restricted access area on the ground level of the building.

	Design shall meet the requirements of KRS # 58.200
	All water systems shall include a detailed flushing and cleaning procedure which protects the project equipment

**HVAC - Owner's Project Requirements**

Reference	Systems Basis of Design Requirements
	Define summer and winter outdoor design conditions.
	Define summer and winter indoor design conditions by control zone.
	Define acceptable summer and winter part load conditions range by control zone.
	Define basis of HVAC load & energy analysis calculations.
2003 IECC & ASHRAE 90.1 (2010)	Define minimum energy efficiency requirements.
ASHRAE 55-2004	Define Thermal Environmental Conditions.
ASHRAE Std.55.2	Define air filtration performance requirements.
	Define Building Systems operating set points.
	Define acceptable HVAC related sound levels.
	Define special equipment utility requirements.
	<b>Design Requirements</b>
	Chiller sizing strategy -use two or more chillers to carry full load, plus one chiller for redundancy
	Drawings shall show chiller tube pull space within the chiller room. Space must be adequate for both condenser and evaporator tube pulls. If necessary, overhead doors may be provided to allow pulling space.
	Chillers shall be located so that initial installation (and future replacement) can be accomplished without undue equipment disassembly or architectural demolition. Ideally, the chiller room shall open to an accessible outdoor area.
	Coordinate chiller room requirements with architectural design to make sure adequate openings (e.g. overhead doors) are provided to allow ready chiller installation/replacement access. Verify that column spacing is adequate to allow passage of the largest chiller equipment.

	Building service lines shall not be routed on the roof.
	Two pipe change-over heating and cooling systems are unacceptable.
	<p>For unitary systems (variable-refrigerant, fan coils, heat pumps, etc., outdoor air must be supplied by dedicated outdoor unit(s) that will introduce outdoor air at room-neutral conditions. Do not supply unconditioned outside air directly to a room or room terminal unit.</p> <p><i>Comment: Outdoor air systems usually run constantly, even when individual units are not running. Introducing extremely cold or hot/humid air to spaces is unacceptable. In addition, unitary equipment may not be able to handle institutionally-required outdoor air requirements.</i></p>
DECA CEMCS Interface Standards (latest version)	<p>Building Automation Systems (BAS) shall conform to the latest version of the DECA standards for interfacing with the Commonwealth Energy Management and Control System (CEMCS), a statewide energy reporting and analysis project that became operational in 2012.</p> <p><i>Comment: BAS trend data will be collected and transmitted to CEMCS servers for energy tabulation and operational analysis. Adherence to the CEMCS interface standard will simplify the implementation.</i></p>
	HVAC control sequences shall be written and presented with the Phase A schematic drawings and P&ID diagrams.
	<p>Roof mounted equipment shall be minimized. Preferably, all HVAC equipment shall be located within the envelope of the building.</p> <p><i>Comment: This does not preclude the use of roof-mounted equipment, per se. It does mean that the proposed equipment shall be discussed during early design with DECA and written approval obtained. Concerns include roof access for maintenance, and the ability to replace the roof system with the equipment intact.</i></p>
	Packaged rooftop unitary heating and cooling systems shall not be used as the main HVAC system.
	<b>Administrative Documents Requirements</b>
Record Drawings	Mechanical schedules shall include data, including electrical parameters, for as-installed equipment in lieu of as-specified equipment.
Record Drawings	<p>HVAC control sequences and P&amp;ID diagrams shall be included on the as-built drawings. Placing control sequences in the specifications is unacceptable.</p> <p><i>Comment: This information is most vital to operating staff, both initially and in the future, who wish to become familiar with the building's HVAC system. While drawings tend to be kept around somehow, specifications are often lost and are usually unavailable to building staff.</i></p>

230000-5	P & ID (Piping & Instrumentation Diagram) Requirements.
230000-5	System Airflow Diagram and Air Balance Schedule Requirements.

### Integrated Automation - Owner's Project Requirements

Division	Specifications Requirement
2500000	<p>HVAC control sequences shall be written and presented with the Phase A schematic drawings and P&amp;ID diagrams.</p> <p><i>Comment: Unfortunately, it is all too common within the design profession to write the control sequences at the last minute and/or let the control vendor write them. The control sequences are the responsibility of the design engineer and can, and indeed MUST be developed during schematic design. One cannot design a system if it is not known how it will be controlled and operated.</i></p>
	<b>Systems Basis of Design Tab</b>
	Building Automation Systems (BAS) shall fully conform to the current ASHRAE BACnet standard.
DECA CEMCS Interface Standard s (latest version)	<p>Building Automation Systems (BAS) shall conform to the latest version of the DECA standards for interfacing with the Commonwealth Energy Management and Control System (CEMCS), a statewide energy reporting and analysis project that became operational in 2012.</p> <p><i>Comment: BAS trend data will be collected and transmitted to CEMCS servers for energy tabulation and operational analysis. Adherence to the CEMCS interface standard will simplify the implementation.</i></p>
	<b>Design Requirements Tab</b>
	General MEP requirements
	<b>Functional Requirement</b>
	General MEP requirements
	<b>Administrative Requirements</b>
Record Drawings	<p>HVAC control sequences and P&amp;ID diagrams shall be included on the as-built drawings. Placing control sequences in the specifications is unacceptable.</p> <p><i>Comment: This information is most vital to operating staff, both initially and in the future, who wish to become familiar with the building's HVAC system. While drawings tend to be kept around somehow, specifications are often lost and are usually unavailable to building staff.</i></p>
	General MEP requirements

**HVAC - Integrated Automation****Central Energy Management and Control System (CEMCS) Introduction****Controls Design Standard and Control Points List Spreadsheet for CEMCS.****An Introduction to CEMCS Requirements with instructions for the A/E/C Community in the use of the CEMCS Control Points List Spreadsheet.****1.0 Introduction:**

Welcome to the Kentucky Division of Engineering and Contract Administration's Controls Design Standards for implementing the Division's requirements to support CEMCS.

CEMCS is a program being implemented by the Commonwealth of Kentucky to actively reduce the energy consumption of the Commonwealth's facilities. In order to support that effort it is apparent that some standardization of the buildings controls systems must occur. This standardization does not relate to the brand of control systems being used; rather the requirements for (a) communicating with the CEMCS database as to format and rate, (b) the control systems architecture required to meet the CEMCS objectives and (c) control point data required to adequately diagnosis the performance of the building's controlled systems.

Requirements for items (a); the communication format and (b); the control system architecture, are presented within the Spreadsheet Tab: "CEMCS System Requirements" of this spreadsheet. These requirements should be familiar to those, within the A/E/C community, accustomed to specifying controls systems.

The requirements of item (c), the CEMCS control points data collection, are considerably more complicated.

1. They require the control system to collect the information needed to diagnose the performance of the building.
2. The control system must trend this data in increments and for durations that are valuable for this diagnosis.
3. The point information must be in a consistent format such that the CEMCS program and staff can readily identify the location and nature of the point data being collected.
4. And finally, there must be some uniformity as to what points are required for the various building systems being controlled.

**1.1 Communication Format and Control System Architecture**

In order to facilitate the requirements of CEMCS, the controls system Designer must incorporate the requirements listed under the spreadsheet tab "CEMCS System Requirements". This architecture and communications format must be incorporated into the project control system specifications.

**1.2 Control Points List Spreadsheet**

The following is a description of how to utilize this CEMCS Control Points List Spreadsheet. This spreadsheet has not been developed as a design tool, although a knowledgeable designer could utilize it as such with some effort and ingenuity. Rather this Design Standard was developed for the purpose of communicating the intent of DECA regarding control system uniformity. As such, its capabilities are limited to this objective and will be an evolving document as new systems become popular or obsolete.

### 1.3 System Selection

This Control Points List Spreadsheet is subdivided into spreadsheet tabs grouped by system type. These system types are currently classified into the following spreadsheet tabs:

#### 1.3.1 System Selection Subcategories

- Room Units (PTAC, Mini-Splits, Fan Coils, Unit Ventilators, WSHP, etc.)
- CW – VAV AHU (Chilled Water, VAV, AHU's)
- Metering and Monitoring
- Exhaust Fans
- 100% OA Units (Makeup Air Units)
- Air Terminal Units
- CW SZ AHU (Chilled Water, Single Zone, AHU's)
- CW DD AHU (Chilled Water, Double Duct, AHU's)
- DX RFT & SS SZ AH (DX Rooftop & Split System, Single Zone Air Conditioning Equipment)
- DX RFT & SS VAV AH (DX Rooftop & Split System, VAV Air Conditioning Equipment)
- Energy Recovery Vent Units (Energy Recovery Ventilating Units)
- Lighting Systems
- Unitary Heat (Radiation, Unit Heaters, Cabinet Heaters, Reheat, etc.)
- Equipment Monitoring Interface
- WSHP Loop Systems (Water Source Heat Pump Loop Systems; Pumps, Boilers, Towers, etc.)
- Chilled Water Systems (Pumps, Chillers, Towers, etc.)
- Hot Water Systems (Pumps, Boilers, etc.)

Within each of the subcategory tabs is a listing of the most common equipment / sub-component configurations encountered in the Commonwealth's facilities for that subcategory. This listing should be considered as extensive but by no means exhaustive in nature. There will be combinations that cannot realistically be incorporated into this document.

These configurations are presented in Column A of each spreadsheet tab. In most cases this list is too lengthy to be effectively searched; therefore each spreadsheet includes an Excel filter provision to simplify the selection process. This filter is also located in Column A within the first 10 rows (typically row 6) and is labeled "Filter List Here". The Designer need only right click on the dropdown arrow to reveal the system sub-components within the current spreadsheet.

For instance under the "Metering and Monitoring" tab the filter drop down allows you to choose among sub-components such as:

- Analog BTU meter
- Analog Chilled Water Energy
- Pulse Chilled Water Energy
- Analog Electric Meter
- Pulse Electric Meter
- Analog Fuel Oil Meter
- Pulse Fuel Oil Meter
- Analog Gas Meter
- Pulse Gas Meter
- Outside Air Conditions / History
- Outside Air Conditions / Degree Day



Upon selecting the appropriate sub-component the spreadsheet filters the points list to only those applicable to the sub-component selected in the filtering provision. (As a practical matter, if the project requires the designer to utilize multiple systems within this spreadsheet, it is more expedient to copy and paste each configuration into another spreadsheet organized specifically for that project.)

## **1.4 Additional Point Information**

### **1.4.1 Agency Point Priority**

Column B of each system subcategory contains another filtering provision headed as "Agency Point Priority". The purpose of this Agency Point Priority column is to communicate what priority to apply to various points which might be included in the Designer's point list specification.

CEMCS requires certain points to be trended; yet there are numerous points which although not required for energy diagnostics, do represent information the Using Agency would like to monitor through CEMCS.

The Designer should also note that the points listed may include points not applicable to the equipment / system being considered. For instance the Gas Heating / Cooling Rooftop points list will include provisions for four stages of heating control which may well be beyond the number of stages available on most packaged rooftop units. It is not intended for the points list to become prescriptive as to accessories or options that might be applied to the referenced item. The Designer is still responsible for the design of the systems and their controls elements.

However certain information is required to achieve the CEMCS goals and the preferences of the Using Agency. Therefore the points list spreadsheet includes the "Agency Point Priority" filter provision. Each point has a priority code attached, ranging from 1 to 4. This priority code is to be interpreted as follows:

1. Required
2. Required where applicable
3. Recommended
4. Recommended where applicable

Therefore the Designer is expected to include within the controls specification the points prioritized as #1 and if in fact the point is applicable those prioritized as #2. The Designer is expected to work with the Using Agency to determine the Agency's preference as to those points prioritized as #3 and where applicable those prioritized as #4.

So if the Designer wishes to view only the points required by CEMCS, the filter would be configured to only the #1 grouping. The more recent spreadsheet program versions include provisions to include or exclude various combinations of the filter selections.

With these steps complete the Designer has a base points list by which the control points list specification may be more fully defined as appropriate to the Owner's Project Requirements.

### **1.4.2 I / O Point Abbreviation**

The next step for the Designer is to apply abbreviations the Controls Programmer can utilize to develop unique point identifiers, such that CEMCS can trend each point in the project. These point abbreviations are to be consistent and recognizable to the CEMCS and Agency staff. Therefore the recommended point abbreviations are included in the spreadsheet. The Designer

is strongly encouraged to utilize these abbreviations presented to describe the project points. The abbreviations have for the most part been extracted from ISA (Instrument Society of America) and the National CAD Standard abbreviations. It is important to DECA, the Using Agencies and to the CEMCS effort for this nomenclature to be used not only in the points list but also within the Sequence of Operations descriptions and within the equipment / device schedules. Guidance for undesignated points may be found within ANSI/ISA S5.1-1984 (R 1002) standard or on websites such as [www.engineeringtoolbox.com](http://www.engineeringtoolbox.com) referencing ISA Codes for Process Instrumentation.

Previously the tagging of equipment and control points has been left to the discretion of the Designer. However in support of the CEMCS requirements the Designer will be expected to adopt nomenclature consistent with that presented within this design standard document. The Designer is directed to the CEMCS Spreadsheet subcategory tab "Equipment Tagging Nomenclature" for the MEP equipment nomenclature guidelines presented by this Standard. Deviation from this naming convention on DECA projects requires approval by the Project Manager.

For instance a high static pressure switch in the supply air duct is designated as "SA\_HSP\_S". This communicates the point is located in the "SA" supply air, it is sensing "HSP" high static pressure and is a "S" switch which identifies it as a binary device thus the CEMCS or Agency staff knows to look for a Normal/Fail, or 1/0 value being reported by the BAS. The supply air static pressure sensor on the other hand is designated as "SA\_SP", again "SA" indicating supply air and "SP" sensing static pressure but without the switch designation the staff will now look for an analog value to be reported to the CEMCS database.

When this document does not suggest an abbreviation or nomenclature applicable to a point or device required for the project, the Designer is expected to look to the National CAD Standard or the ISA for guidance. The format of such an item should still be consistent with the format presented within this standard.

#### **1.4.3 P&ID Tag Identification**

It is intended that the project's controls point list be included with the Sequence of Operations and P&ID's ("Process & Instrumentation Diagrams" or flow schematics and instrumentation diagrams) in the project drawing package. The P&ID Tag column in the Controls Points List Spreadsheet is intended to be incorporated into the project's controls point list. Its purpose is to cross reference the P&ID instrument tag with the control point identification.

For instance the supply air temperature for a given air handler will have a point abbreviation of SA\_T and a unique point identifier developed by the controls programmer; however if it fails, the technician wanting to change it will need to know that it is the temperature transmitter designated as TT-503 on the P&ID and within the materials list, so that he will be able to order a replacement and locate it in the system. For this reason where a point is directly related to a device it is intended that the designer include that cross-reference designation in the control points list P&ID Tag column.

#### **1.4.4 Point Location Identifiers**

There are a number of additional identifiers the Designer must provide the controls programmer so that the unique point identifiers will indeed be unique. They are as follows:

KY Archibus Building ID #: Each building operated by the Commonwealth of Kentucky is assigned an asset ID # and is tracked within the Commonwealth's Archibus database. The Designer is to include this ID # within the project's Controls Point List. This ID# can be acquired from the DECA Project Manager.

Building Area Served Identifier: It is recommended that the Designer provide the controls Programmer with a Building Area Served Identifier that reflects an appropriate sub-division of a larger building. This identifier is at the Designer's discretion but should be consistent with the projects drawing presentation. For instance if the building consist of multiple floors and multiple wings, the Designer might include a designator for the East wing of the Second Floor as "2E". The intent is to assist the Using Agency in responding to specific non-performing points in a more efficient manner. However, correlating a point to a more specific location, such as a room number, is discouraged; as these more specific designations tend to change with time.

#### **1.4.5 Discipline and Drawing Layer Identifiers**

It is intended that the Discipline and Drawing Layer Identifiers nomenclature be adopted from the National CAD Standard or the standard designated as the drawing standard adopted for the subject project. Deviation from the National CAD Standard requires approval from the Project Manager.

Discipline Identifier: This discipline identifier should be consistent to the project drawing discipline nomenclature, such that the location of the point may be correlated to the unique point name. For instance if all electrical drawings are referenced with an E prefix, and the corresponding points list applies to an electrical device such as a power monitor, then this identifier should be "E". If on the other hand the electrical drawings are divided into sub-disciplines; for instance power is under an EP discipline designator, then "EP" would be the appropriate Discipline Identifier for the power monitoring points list.

Drawing Layer Identifier: The National CAD Standard puts forth certain recommendations for managing drawing layers within the project drawings. It is DECA's recommendation that the control points name be associated with the drawing layer that presents the devices associated with the points. The National CAD Standard also suggests the possibility of Major and Minor Layer groups. For instance a point associated with a piece of HVAC Equipment could be associated with a HVAC major layer and an EQPM minor layer.

These designations are now becoming important in the management of drawings within BIM project delivery methods. Therefore the Designer is encouraged to correlate the point devices or equipment with the Drawing Layer Major or Minor Group within the Controls Points List such that the controls Programmer can incorporate this information into the unique point identifier.

#### **1.4.6 System Component Identifier**

The system component identifier is an important element of the unique point name. For CEMCS and the Using Agency to gain full benefit from these point identifiers the system component must be correlated to the point. Typically the System Component is a piece of equipment such as air handling unit "AHU-7" or air terminal unit "VAV-35". This project equipment designation is what is intended for the "System Component Identifier" element.

However, it is incumbent upon the Designer to coordinate the project's equipment designators with the existing equipment tagging. There cannot be two AHU-1's within the same Archibus Building.

#### **1.4.7 I / O Point Unique ID #**

The I / O Point Unique ID# is strictly the domain of the controls Programmer. These numbers require no input from the Designer as to selection. However the Designer is expected to leave fields within the Controls Point List documentation such that the Programmer will record the

Unique ID# assigned to the listed point in the Record Documents. The Designer is likewise responsible to verify this information is captured in those Record Documents.

## 1.5 Summary

The "Controls Points List Spreadsheet is a tool for control systems Designers and Programmers which communicates DECA's intentions for implementing the provisions of CEMCS and providing more uniformity in the control systems product being provided to the Commonwealth's various Agencies.

A brief recap of the steps required for the Designer to use this tool is as follows:

1. Incorporate the Control System Architecture and the CEMCS Communication Format requirements found under tab "CEMCS System Requirements" into the project control system specifications.
2. Identify the project Components and Equipment tagging consistent with the nomenclature presented in the "Equipment Tagging Nomenclature" tab or as referenced in the applicable Drawing Standard.
3. Locate the system sub-category tab in the spreadsheet that applies to the system, component or equipment points list being selected.
4. Within the system sub-category spreadsheet, filter the component / equipment listing in Column A to the points list that best fits your application. If specifying multiple items it is best to copy the current selection to another spreadsheet specific to the project.
5. With your working points list, filter and edit the points list to match the application.
6. If additional points are required for a component, add an appropriate point abbreviation to the "I/O Point Abbreviation" field consistent with the format of this standard's point abbreviations.
7. Where discrete Instruments are associated with a point in the project's P&ID or Flow Diagrams, add the instrument's tag identifier into the "P&ID Tag" field. Leave blank if no discrete cross reference applies.
8. Enter the KY Archibus ID# into its field.
9. Enter an Area location reference to the "Building Area Served" field.
10. Enter a Discipline Identifier into the "Discipline" field.
11. Enter the drawing layer designations into the National CAD Standard Major Group and Minor Group (if applicable) fields.
12. Enter the system component /equipment tag designation into the "System Component Identification" field.
13. Make provisions in the point list for the controls Programmer to enter the "I/O Point Unique Identifier" into the corresponding field.
14. Verify that all the information is appropriately incorporated into the Record Drawings / Documents.

### CEMCS Requirements for Project Control Specifications

#### KY / CEMCS Control System Requirements

1. **Zone Controls (Level 1)** Data shall be uploaded to Field Cabinets (Level 2) at the more stringent requirement of:

- § No less than every two (2) minutes,
- § At the frequency specified in contract documents, or
- § At a rate required to successfully implement the specified sequence of operation.

It is preferred that these systems utilize an open protocol.

- § Lab controls shall meet the requirements of NFPA 45, ANSI z9.5 or other fume hood standards as applicable.

- § Field Cabinets shall be open protocol systems; BACnet is the preferred network protocol, LON is acceptable for smaller buildings where authorized by the using agency.

3. **Front End (Level 3)** The Front End Software shall reside on a PC and/or server, capable of running robust high speed hardware Ethernet data link using open standard TCP/IP connections.

§ BACnet open protocol is a requirement for Level 3

§ Data accumulated from Field Cabinets shall be transferred at 10/100Mbyte/sec unencumbered between the front end and the Commonwealth Office of Technology (COT) database server.

4. **CEMCS Data Transfer** Connectivity Link between the Front End (Level 3) and the Commonwealth Office of Technology (COT) database server. Point Data shall be transferred in SQL Tables to a COT database dedicated to each control system provider.

Like the Level 3 BAS network these connections shall be robust high speed hardware data links like Ethernet using TCP/IP open standard connections. Data on these networks shall run at PC Speeds with virtually no bandwidth restrictions.

For security reasons, it is best that BAS embedded servers provide or serve up data to COT servers. COT best practices security policies state that when connecting servers to the Central FAC database that the most secure connection is when COT is pulling data. In CEMCS, COT servers will pull data at night when network activity is minimal.

5. **CEMCS Point Nomenclature** Each point of control shall be identified with a unique point name consistent with the KY/CEMCS I/O Standard Tag Identification format. This format consist of a multi-component point naming system including:

- i. KY Archibus Building ID #
- ii. Building Area
- iii. Discipline
- iv. Drawing Layer Group
- v. Drawing Layer Sub-Group
- vi. System Component ID
- vii. I/O Point Descriptive Abbreviation
- viii. I/O Point Unique ID #

Reference Example in Each Component / System Spreadsheet Tab

#### Electrical - Owner's Project Requirements

Reference	Design Requirements
	Adequate electrical space shall be provided for maintenance
	In addition to the power utility's billing metering system, "smart" power meters shall be used, at a minimum, to monitor power interval data at every building. Include smart sub-meters for significant process loads (e.g. welding lab at a vocational school) that may need to be accounted for separately. Meters shall be connected to the Building Automation System.
	Where significant quantities of computers are being utilized, the computers shall be served from a color coded power circuit dedicated for computer use.
	Power circuits dedicated for computer use shall be feed from K-rated transformer or other means to minimize transients. Also evaluate need for isolated ground and RIF filtration for these circuits.

	Evaluate the location and the need for power surge protection.
	Photocopiers and other significant office equipment loads shall be feed from a dedicated circuit.
	Evaluate the need for electronic ballast with reduced current and voltage harmonic distortion characteristics.
	Evaluate lighting control system requirements.
	Corridor wall outlets shall be spaced no less than 50 feet and served on individual GFI circuit.
	Emergency, isolated ground and other special receptacles shall be identified by specialized cover plates.
	All power wiring shall be #12 THWN minimum.
	Provide phase loss protection on three phase equipment.
	Present average designed foot candle level for each room on project drawings.
	<b>Functional Requirements</b>
	Power and lighting systems shall be designed to limit impact on information and telecommunications systems to levels established in Systems Basis of Design.
	Major electrical equipment shall be located in a restricted access area on the ground level of the building.
	Critical system elements shall be powered by emergency power service.
	All electrical systems elements shall be accessible for service without unreasonable damage to building or grounds.
	Location of electrical equipment shall consider sound levels established in Systems Basis of Design.

#### Communications - Owner's Project Requirements

Reference	Specification Requirements
	<b>General MEP Standards</b>
	Systems Basis of Design Requirements
	Define communication requirements by space
	Define communication requirements of special equipment or other building systems.
	<b>Design Requirements</b>

	Locate cable routing paths on project drawings and identify acceptable cable retaining methods and details.
	<b>Functional Requirements Tab</b>
	Provide adequate space for communications room(s).
	<b>Administrative Requirements</b>
	Commonwealth Office of Technology Requirements

**Electronic Safety & Security - Owner's Project Requirements**

Reference	Specification Requirements
	General MEP Standards
	<b>Design Requirements</b>
	Locate cable routing paths on project drawings and identify acceptable cable retaining methods and details.
	Fire alarm zones should correspond with sprinkler system zones and be identified on drawings showing interface to other building system components.
	<b>Functional Requirements Tab</b>
	General MEP Standards
	<b>Administrative Requirements</b>
	General MEP Standards

END OF ADDITIONAL MEP REQUIREMENTS